

D U R H A M

County



Council.

SUMMARY OF RETURNS OF INFECTIOUS DISEASE.

Cases Notified or Ascertained during the month ending

31st AUGUST, 1897.

One case of small-pox was reported from the County Borough of South Shields, and also from the district of the River Tyne Port.

Scarlet fever showed a tendency to increase in prevalence in some districts, and was rather prevalent in Hebburn, Felling, and Ryton.

As in previous months very few cases of diphtheria and membranous croup were reported.

There was an increase in the number of cases of enteric fever notified, but the incidence was not marked except in the Borough of Sunderland.

Measles was reported as prevalent in a few districts, and schools were closed in some of the villages of the Sedgely rural district on account of its prevalence.

Diarrhoea was very fatal in many districts, especially in the County Boroughs and Jarrow.

T. EUSTACE HILL,

COUNTY MEDICAL OFFICER OF HEALTH.

*Durham,
September 7th, 1897.*

URBAN DISTRICTS.	Census Population. 1891.	Smallpox.	Scarlet Fever.	Diphtheria.	Membranous Croup.	FEVERS.					Measles.	Whooping Cough.	Diarrhea and Dysentery.	Influenza.	MEDICAL OFFICER OF HEALTH
						Typhus	Enteric or Typhoid	Relapsing.	Continued.	Puerperal.	Cholera.	Erysipelas			
Boro' of Gateshead	85,709	..	7	1	..	..	4 (2)	..	2	..	7	(3)	(34)	..	Reginald Green, M.D., B. Hy.
Boro' of South Shields	78,431	1	34	1 (1)	..	..	6	..	1	1	14	..	(23)	..	W. H. Turnbull, M.B., D. Hy.
Boro' of Sunderland	130,921	..	23 (2)	2	(1)	..	31 (2)	..	1 (1)	..	..	(8)	(90)	..	H. Scutfield, M.D., D. P. H.
Wrlington Borough	38,060	..	16	..	..	..	5 (1)	..	..	..	2	..	(1)	..	J. Lawrence, M.D.
Wharfedale	14,863	..	8 (1)	..	..	..	..	..	..	..	..	..	(2)	..	A. M. Vann, M.R.C.S.
Warrington	21,271	..	2	..	..	..	2	..	..	..	..	..	(1)	..	J. Rawlings, M.R.C.S.
Wigan	33,675	..	1	2	..	..	6 (1)	..	..	..	4	..	(21)	..	J. M. Nicoll, M.B.
Widnes	49,708	..	1	..	..	..	1	..	1	..	3	(3)	(7)	..	Thomas Horne, M.D.
West Hartlepool	42,710	..	10 (1)	..	..	..	3 (1)	..	..	..	2	(3)	(11)	..	S. Gounley, M.D.
Widnes Plain	9,837	..	6	..	1	..	1	..	..	..	1	..	..	..	T. Benson, L.R.C.P.
Widnes	4,341	..	..	..	..	..	..	..	..	..	1	..	..	..	A. H. Sevier, M.B.
Widnes	6,269	..	..	1 (2)	..	..	..	..	..	..	..	..	(1)	..	George Renton, M.D.
Widnes	10,527	..	..	..	..	..	2 (1)	..	..	..	..	1	20 (9)	1	T. A. McCallagh, M.R.C.S.
Widnes	13,371	..	8	..	..	..	5	..	1	..	1	..	xxx (10)	2	Philip Brown, M.D.
Widnes	14,239	..	..	..	..	..	..	..	..	..	..	..	(4)	(1)	H. Smith, M.D.
Widnes	8,175	..	..	..	..	..	..	..	..	..	..	..	..	..	George Renton, M.D.
Widnes	17,490	..	14 (1)	..	2	..	2 (1)	..	..	..	2	(1)	(2)	..	T. M. Clayton, M.B.
Widnes	16,645	..	23 (2)	..	..	..	2 (1)	..	..	..	2	(6)	(3)	..	Geo. N. Wilson, M.B.
Widnes	12,726	..	..	..	..	..	1 (1)	..	..	(1)	1	..	..	..	J. Adamson, M.D.
Widnes	6,476	No	cases notified.	..	..	..	..	..	..	..	..	..	..	..	D. S. Park, F.R.C.S.
Widnes	4,456	..	..	..	..	..	1	..	..	..	..	..	..	..	George Renton, M.D.
Widnes	5,553	..	12	..	..	..	..	..	..	..	..	..	xxx	..	Philip Brown, M.D.
Widnes	9,044	..	..	..	(1)	..	1	..	..	..	2	..	(5)	(1)	L. Gerald Dillon, M.D.
Widnes	9,537	..	4	..	..	..	2	..	..	..	2 (1)	(2)	xx (1)	..	S. Fielden, M.D.
Widnes	10,226	..	2	1	..	..	3	..	..	..	..	(1)	10 (7)	..	James Stobo, L.R.C.P.
Widnes	16,300	..	1	1	..	..	..	..	..	..	2	..	xxx (4)	..	R. S. Anderson, M.D.
Widnes	1,864	..	..	1 (1)	..	..	2	..	..	..	1	..	xx	..	John Gray, M.B.
Widnes	7,776	..	1	..	..	..	3	..	..	..	..	..	(1)	..	T. Benson, L.R.C.P.
Widnes	6,978	..	3	..	..	..	..	..	..	..	..	..	..	..	T. Benson, L.R.C.P.
Widnes	4,554	..	4	..	..	..	..	..	..	..	..	..	10	..	William Tiplady, L.R.C.P.
Widnes	9,174	..	2	..	..	..	2	..	..	..	..	..	xx (4)	(1)	A. W. Attwater, L.R.C.P.

RURAL DISTRICTS.

Census Population 1891	Smallpox.	Scarlet Fever.	Diphtheria.	Meningitis.	Typhus.	Enteric or Typhoid.	Relapsing.	Continued.	Puerperal.	Cholera.	Erysipelas.	Measles.	Whooping Cough.	Dysentery & Cholera.	Influenza.	MEDICAL OFFICER OF HEALTH.
25,954	..	1	1	1	..	4	..	..	..	1	1	..	(2)	(7)	..	T. A. McCullagh, M.R.C.S.
35,377	..	11 (1)	..	..	..	2 (1)	..	..	..	10	..	..	(4)	(4)	..	G. W. Ellis, L.R.C.P.
1,004	No	cases	notified.	..	..	..	..	..	..	..	..	..	..	..	..	A. H. Sevier, M.B.
3,804	No	cases	notified.	..	..	..	..	1	..	..	..	..	..	x	..	J. Atkinson, L.R.C.P.
6,045	..	..	..	..	..	..	..	..	..	..	6	..	(1)	(10)	..	James Beattie, L.R.C.P.
50,594	..	7	..	..	..	3	..	..	..	..	..	..	..	..	..	J. Taylor, M.D., D.P.H.
9,411	No	return.	..	..	..	..	..	..	..	2	..	..	..	(1)	..	C. M. Hardy, M.B.
14,400	..	8	..	..	..	1	..	..	..	..	..	..	..	..	..	W. A. Hepburn, M.D.
10,633	No	cases	notified.	..	..	..	..	..	..	4	..	..	..	..	..	E. Jepson, M.D.
36,782	..	..	..	1	..	2	1	..	..	..	..	(2)	..	(4)	..	J. Arthur, L.R.C.P., D.P.H.
2,657	..	..	..	..	..	..	..	..	..	..	..	..	..	(2)	..	S. Gourley, M.D.
13,109	..	..	1	..	..	5 (1)	..	..	..	2	..	..	..	..	..	D. S. Park, F.R.C.S.
5,610	No	cases	notified.	..	..	..	..	..	..	1	..	..	..	84 (3)	..	J. R. Sutherland, L.R.C.S.
16,231	..	5	..	..	..	2	..	..	..	..	..	..	..	..	..	J. Wilson, M.D.
7,222	..	4	..	..	..	1	..	5 (1)	..	3 (1)	..	..	..	(4)	..	W. T. Bolton, L.R.C.P.
18,515	..	3	..	..	..	..	..	..	..	1	..	..	..	(2)	..	G. R. Sheraton, L.R.C.P.
12,797	..	6	3	..	..	..	..	..	(1)	..	1	..	..	(2)	..	W. Armstrong, L.R.C.P.
11,990	..	..	3	..	..	..	..	..	..	..	1	..	..	(10)	..	J. W. Blandford, L.R.C.P.
17,552	..	(1)	..	..	..	4	..	..	..	..	..	..	..	..	..	Robert Stobo, M.B.
523	No	cases	notified.	..	..	..	..	..	..	..	..	..	..	..	..	C. J. Connon, M.B.
2,657	..	..	..	..	..	..	..	..	..	..	..	..	..	(1)	..	Thomas Livingstone, M.D.
3,510	No	cases	notified.	..	..	..	..	..	..	..	..	..	..	..	..	John Easton, L.R.C.P.
3,169	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	T. V. Devey, L.R.C.P.
..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	S. Biggart, M.D.
..	1	..	..	..	..	..	..	..	..	..	..	..	..	6	..	W. Edmund Harker, M.B.

X A few cases. XX Prevalent. XXX Very Prevalent. Figures in Parenthesis indicate number of deaths.
The Notification Act is not in operation in districts marked * a Group.

COUNTY OF DURHAM.

SUMMARY OF INFECTIOUS DISEASE

During the six months ending 31st August, 1897.

	No. of Cases Reported.						No. of Districts from which Cases were reported.					
	Mar.	April.	May.	June.	July.	Aug.	Mar.	April.	May.	June.	July.	Aug.
Small-pox ..	1	..	2	..	1	2	1	..	2	..	1	2
Scarlet Fever ..	379	271	258	256	272	233	39	32	33	35	36	31
Diphtheria ..	46	20	20	19	28	14	23	12	8	11	13	12
Membranous Croup	15	8	4	3	4	5	10	7	4	3	4	4
Typhus Fever ..	2	..	..	..	..	..	2	..	..	..	..	..
Enteric or Ty- } phoid Fever.. }	72	47	47	55	65	112	30	22	27	22	26	33
Relapsing Fever..	2	..	..	..	..	1	1	..	..	..	..	1
Continued Fever..	12	8	5	4	12	12	8	7	3	4	5	7
Puerperal Fever..	13	6	1	6	4	1	11	6	1	6	4	1
Cholera .. ..	..	..	..	..	..	..	..	..	..	..	..	..
Erysipelas ..	105	58	92	83	84	83	32	24	34	30	31	28
	No. of Deaths Reported.											
Measles	17	27	32	26	17	12	14	15	19	17	16	13
Whooping Cough	55	43	29	42	34	34	20	18	16	23	19	12
Diarrhoea and } Dysentery .. }	16	6	9	23	43	292	14	8	11	17	21	40
Influenza	15	30	21	13	6	4	20	14	22	15	8	6

Council of the County Palatine of Durham.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

T. EUSTACE HILL, M.B., B.Sc., F.I.C.,

INCLUDING A

SUMMARY OF THE ANNUAL REPORTS OF THE
DISTRICT MEDICAL OFFICERS OF HEALTH,

AND OTHER RECORDS,

FOR THE YEAR 1896.

Durham :

CHARLES THWAITES, COUNTY PRINTER AND STATIONER, MARKET PLACE.

1897.

CONTENTS.

ADMINISTRATIVE COUNTY.

	PAGE
Introductory Remarks	i
District Health Reports—Printing of	i
Do. Suggested size of	ii
Special Reports—Duty of sending to County Council	ii
Sanitary Work of County Council, 1896	iv
Sanitary Progress in County	iv
Sanitary Districts and Administration	vii
Sanitary Officials—Changes in, during 1896	viii
Population	viii
Do. Estimation of, in Sanitary Districts	ix
Births and Birth-rate	ix
Deaths and Death-rate	x
Uncertified Deaths and Unqualified Medical Practice	xi
Infant Mortality	xii
Zymotic Diseases, Deaths and Death-rate	xiii
Table of Chief Vital Statistics	xv
Registrar General's Classification of Zymotic Deaths	xvi
Small-pox	xvi
Scarlet Fever	xvii
Do. School Closure on account of	xviii
Diphtheria and Membranous Croup	xviii
Do. do. Causes of	xix
Typhus Fever	xx
Enteric or Typhoid Fever...	xx
Do. Monthly Table of Cases and Deaths	xxi
Do. Seasonal Prevalence of...	xxi
Do. Causes of	xxii
Continued Fever	xxiv
Puerperal Fever	xxiv
Measles	xxiv
Do. Rapidity of spread of	xxv
Whooping Cough	xxvii
Diarrhoea	xxviii
Infectious Diseases (Notification) Act...	xxix
Do. do. Cost of	xxix
Table giving Number of Cases Notified during each month of 1896	xxxi
Isolation Hospital Accommodation	xxxii
Sanitary Districts without Hospital Accommodation	xxxiii
Water Supply	xxxiv
Do. Pollution of	xxxv
Housing of the Working Classes	xxxvi
Excrement Disposal and Removal	xxxvii
House Drainage, Sewerage, and Sewage Disposal	xl
Work of Inspectors of Nuisances	xlii
Cowsheds, Dairies, and Milkshops	xliii
Slaughter-houses	xliv
Factories and Workshops...	xliv
Bye-laws in Sanitary Districts	xliv
Table giving Number of Births and Deaths, both general and zymotic, during each month of 1896	xlv
Charts giving Monthly Deaths from Zymotic Diseases	xlvii and xlviii

CONTENTS—CONTINUED.

BOROUGH.

PAGE

Darlington	...	...	...	...	...	...	1
Durham	...	...	...	...	...	...	3
Hartlepool	...	...	...	...	...	...	5
Jarrow	...	...	...	...	...	...	7
Stockton	...	...	...	...	...	...	11 and 117
West Hartlepool	...	...	...	...	...	...	12

URBAN DISTRICTS.

Barnard Castle	...	...	...	...	...	...	14
Benfieldside	...	...	...	...	...	...	15
Bishop Auckland	...	...	...	...	...	...	18
Blaydon	...	...	...	...	...	...	20
Brandon and Byshottles	...	...	...	...	...	...	22
Consett	...	...	...	...	...	...	24
Felling	...	...	...	...	...	...	27
Hebburn	...	...	...	...	...	...	28
Hetton-le-Hole	...	...	...	...	...	...	31
Houghton-le-Spring	...	...	...	...	...	...	34
Leadgate	...	...	...	...	...	...	36
Ryton	...	...	...	...	...	...	39
Seaham Harbour	...	...	...	...	...	...	40
Schildon and East Thicky	...	...	...	...	...	...	42
Southwick	...	...	...	...	...	...	44
Spennymoor	...	...	...	...	...	...	46
Stanhope	...	...	...	...	...	...	50
Stanley	...	...	...	...	...	...	52
Tanfield	...	...	...	...	...	...	54
Tow Law	...	...	...	...	...	...	55
Whickham	...	...	...	...	...	...	57
Willington	...	...	...	...	...	...	58

RURAL DISTRICTS.

Auckland (No. 1 Division)	...	...	..	...	60
Do. (No. 2 „ )	...	...	...	...	62
Barnard Castle (Barnard Castle Division)	...	...	...	...	66
Do. (Middleton „ )	...	...	...	...	66
Do. (Staindrop „ )	...	...	...	...	68
Chester-le-Street	...	...	...	...	70
Darlington	...	...	...	...	74
Durham (Eastern Division)	...	...	...	...	76
Do. (Western „ )	...	...	...	...	78
Easington	...	...	...	...	79
Hartlepool	...	...	...	...	82
Houghton-le-Spring (Northern Division)	...	...	...	...	84
Do. (Southern „ )	...	...	...	...	87
Lanchester (Lanchester Division)	...	...	...	...	89
Do. (Medomsley „ )	...	...	...	...	93
Do. (Stanley „ )	...	...	...	...	94
Sedgefield	...	...	...	...	96
South Shields	...	...	...	...	99
Stockton	...	...	...	...	101
Sunderland	...	...	...	...	103
Weardale (Derwent Division)	...	...	...	...	106
Do. (Stanhope „ )	...	...	...	...	107
Do. (St. John's „ )	...	...	...	...	109
Do. (Wolsingham )	...	...	...	...	111

CONTENTS—CONTINUED.

PORT SANITARY DISTRICTS.

	PAGE
Hartlepool	113
River Tyne	114

ADDENDUM.

Stockton Urban District	117
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APPENDIX.

Table A.—URBAN DISTRICTS.—Population, Birth-rate, Death-rate, &c.

Table AI.—URBAN DISTRICTS.—Deaths at Certain Ages, and from Certain Specified Causes.

Table B.—RURAL DISTRICTS.—Population, Birth-rate, Death-rate, &c.

Table BI.—RURAL DISTRICTS.—Deaths at Certain Ages, and from Certain Specified Causes.

Table C.—Chief Vital Statistics of the Administrative County.

Table D.—URBAN DISTRICTS.—Summary of Work of Inspectors of Nuisances.

Table DI.—RURAL DISTRICTS.—Summary of Work of Inspectors of Nuisances.

THE COUNCIL OF THE COUNTY PALATINE OF DURHAM.

TO THE CHAIRMAN AND MEMBERS OF THE
HEALTH COMMITTEE.

GENTLEMEN,

I beg to submit to you my sixth Annual Summary of the Reports of Medical Officers of Health in this administrative county for the year 1896.

The arrangement of the summary is the same as in previous years, each health report being separately summarized, and I have also again briefly reviewed the chief vital statistics of the administrative county and other matters of public health interest therein.

Annual reports were received from every medical officer of health, and, with few exceptions, they were in my hands by the end of February. But for the fact that one of the reports was not received till the end of May this summary would have been issued some months earlier, and as the value of the summary is, to some extent, dependent on its early issue, it is to be hoped that this unnecessary delay will not again occur. With three exceptions all the reports were printed, the Urban District Councils of Ryton and Stanhope and the Rural District Council of Weardale having complied with the suggestion of your Committee in this respect. The reports for the following districts were not printed, and consequently, without doubt, many of the valuable suggestions contained in

them did not receive that publicity and attention which is desirable :—

URBAN.

RURAL.

Houghton-le-Spring. Houghton-le-Spring (2 reports).
Tow Law.

Most of the printed reports were of the ordinary (octavo) book size, which is the most convenient both for manipulation and for binding, and I would suggest that in future all the printed reports should be of that size.

As to the reports themselves they were, with very few exceptions, carefully compiled, and the statistical tables were much more accurate than was formerly the case. The mistake is, however, made in some reports of excluding from the statistics the deaths occurring in the district of persons not belonging thereto, and not at the same time including those deaths which occurred in public institutions and elsewhere outside the district among persons who formerly belonged to it. Such a proceeding has the effect of making a death-rate appear more favourable than it really is, and in the summary I have, where possible, made the necessary corrections.

Another matter to which the attention of the District Councils and their medical officers of health should be drawn is the duty which devolves upon them of sending copies of all special reports to the County Council. Among the duties of the medical officer of health laid down by the Local Government Board in their Order of March, 1891, are the following :

15.—“ *He shall give immediate information to us of any outbreak of dangerous epidemic disease within the district, and shall transmit to us a copy of each annual report and any special report. He shall make a special report to us of the grounds of any advice which he may give to the sanitary authority with a view to their requiring the closure of any school or schools in pursuance of the Code of Regulations approved by the Education Department, and for the time being in force.*”

16.—“ *At the same time that he gives information to us of an outbreak of infectious disease, or transmits to us a copy of his annual report or of any special report, he shall give the like information or transmit a copy of such report to the County Council of the county within which his district may be situated.*”

In past years these duties have not been properly discharged, and during 1896, although in 24 sanitary districts schools were closed owing to the prevalence of infectious diseases, information of such closure was received by the County Council from only one district.

It is most desirable that the County Council should be in possession of the information as to the prevalence of infectious diseases afforded by the special reports of the district medical officers of health, particularly where these reports recommend the closure of elementary schools.

It is gratifying to me to record that the

general death-rate of the administrative county for the past year compared very favourably with that of 1895, being 1·7 per 1,000 population lower, a decrease which represents the saving of about 1,200 lives. There was also a decrease in the zymotic death-rate which, but for the large number of deaths from measles, would have been very low. There was a very marked decline in the prevalence of and mortality from enteric fever and diarrhœa, the two diseases which are probably most favoured by insanitary conditions, and without doubt the improved sanitary state of the county is to some extent the cause of this improvement.

The sanitary work accomplished by your Committee or by the County Council, acting on your recommendation, was of a varied and important character. Under the Housing of the Working Classes Act 53 houses were dealt with, and of these 16 were closed, 18 repaired, and the other 19 were under notice at the end of the year. In addition the County Council served notice under the Act on the owners of 45 other insanitary houses, respecting which the Councils of the districts in which they were situated had made default, and 20 of them were closed, and the others repaired.

During the year the sanitary circumstances of 59 villages in the rural districts and of 12 urban districts received the attention of your Committee, and in the majority of cases the District Council intimated

their willingness to remedy the sanitary defects to which their attention was drawn, with the result that many valuable sanitary improvements were effected. The question of the provision of isolation hospital accommodation in the county was also considered by your Committee, and enquiries under the Isolation Hospitals Act were ordered to be held respecting 3 urban districts. The administration of the Rivers' Pollution Acts also occupied much of the time of your Committee, and in addition to the rivers Tees and Wear the pollutions of the river Browney and its tributaries were dealt with.

Representations were made by the County Council to the Local Government Board, (a), under section 42 of the Public Health Act, 1875, respecting the improper scavenging and removal of house refuse in one urban and one rural district, and (b), under section 299 of the Public Health Act, 1875, respecting the default of one Urban and one Rural District Council in the performance of their sanitary duties. The Board decided to hold enquiries into the complaints as to improper scavenging, and one of them was held during the year, with the result that an order for the compulsory scavenging of certain populous townships was made on the Rural District Council. No enquiries were, however, held by the Board into the representations under section 299 of the Act, and I am glad to state that the enquiry as to one of the districts complained of is now unnecessary.

The large number of uncertified deaths occurring in some districts in the county was brought to the notice of your Committee, and on your recommendation the Council adopted the following resolution :

“ That in the opinion of this Committee an
 “ alteration of the law with reference to the certifying
 “ of deaths is urgently necessary, and that in no case
 “ should a death be registered without the production
 “ of a certificate of the cause of death signed either by
 “ a registered medical practitioner or by a coroner
 “ after inquest ; and that the attention of the Local
 “ Government Board and of the General Medical
 “ Council be called to the subject.” I understand that
 the Local Government Board cannot take action in
 the matter, but the General Medical Council have
 given the subject much consideration, and are supporting
 the action of the County Council.

The Council also requested the Local Government Board to take an early opportunity of amending the Housing of the Working Classes Act, 1890, so as to give an appeal against the dismissal of applications for closing orders inasmuch as proceedings of that nature cannot, from any point of view, be regarded as criminal proceedings, and as cases sometimes occur in which there is ground to believe that local influences or private opinions, formed without hearing the evidence, interfere with the course of justice.

The work of the County Inspector and myself has been much the same as in previous years, and

our time has been largely occupied by inspectorial and office work. I attended all Local Government Board Enquiries of a sanitary nature, and, where necessary, gave evidence. I have also, when requested to do so, given evidence in support of sanitary prosecutions by Local Authorities, and otherwise assisted them and their sanitary officers, between whom and myself, I am happy to say, there has been the same cordial co-operation as has existed in previous years, and which is of so much value to me in my work.

I am, Mr. Chairman and Gentlemen,

Your obedient Servant,

June, 1897.

T. EUSTACE HILL.

THE ADMINISTRATIVE COUNTY.

Sanitary Districts and Administration.

The only change in the sanitary districts of the county during the year has been the constitution of the Annfield Plain Urban District. This district is situated in the Lanchester Union, and includes the whole of the township of Collierly, and parts of the townships of Kyo and Greencroft. Its population at the census of 1891 was 9,837. The administrative county now contains 29 urban, 14 rural, and 2 port sanitary districts.

During the year the County Council received an application from the Parish Council of Crook and

Billy Row for the formation of that township into an urban district, but after careful consideration the County Council decided that a *prima facie* case in support of the application had not been made out.

There have been four changes among the medical officers of health, three unfortunately resulting from the deaths of Dr. Kelly, of Felling, Dr. O'Hanlon, of Spennymoor, and Dr. Hewitson, of Weardale, and one by the resignation of Dr. Squance, of the Sunderland rural district. The vacancies have been respectively filled by Drs. Clayton, Anderson, Easton, and R. Stobo. Dr. Benson has been appointed medical officer of health of the Annfield Plain urban district. Among the inspectors of nuisances changes have occurred at Houghton-le-Spring and in the rural districts of Chester-le-Street and Durham, and an assistant inspector has been appointed for the Easington rural district.

Population.

At mid year 1896, the estimated population of the administrative county calculated on the rate of increase between 1881-1891 was 775,611, which is 10,631 higher than the estimated population of the previous year. The population of the urban districts is estimated at 442,047, and that of the rural districts at 333,564, the decrease in the population of the latter being accounted for by part of the Lanchester rural district being formed into the Tanfield urban district. In several of the health reports the difficulty of accurately estimating the population is referred to, and this is

especially so in many districts in this county where the population varies with the state of trade. Thus, in the Houghton and Easington rural districts where some large collieries ceased to work during the past year, the population has considerably decreased in certain townships, while in other parts of the county where there has been a demand for labour the population has very largely increased, with the result that there is in some districts much overcrowding. In some districts the estimated population given by the medical officer of health appears to be too low, but in others, notably in Bishop Auckland, Blaydon, and Stanley, the increase of population recorded is out of all proportion to the natural increase, and probably too high.

Births.

The number of births registered was 27,187, or 597 less than in the previous year, and the birth-rate was 35·0 per 1,000, or 1·3 below the rate for 1895. In the boroughs the birth-rate was only 30·4 per 1,000, but in the other urban districts it was 37·5, and in the rural districts 36·5. The county birth-rate again greatly exceeded the rate for England and Wales, which was only 29·7, and one of the lowest on record. The highest birth-rates were in Houghton-le-Spring (45·2), and Seaham Harbour (43·5) among the urban districts, and in the rural districts of Sedgfield (40·0), Easington (38·5), and Chester-le-Street (38·1); while the lowest rates were in Barnard Castle (26·7), Stanhope (26·8), and the Darlington rural district (24·0).

Deaths.

There was a large decrease in the number of deaths recorded, the total being 13,606 or 1,124 less than in 1895. The general death-rate was 17·5 per 1,000 population, and though this was slightly higher than the rate for England and Wales (17·1), it is nevertheless very satisfactory, seeing that the population is mostly urban and industrial in character, and the birth-rate so high.

The following table compares the death-rates for the county and for its urban and rural districts during the past six years with those for England and Wales, and it will be noticed that the decrease in the county death-rate as compared with the previous year was 1·7 per 1,000 :—

	1891.	1892.	1893.	1894.	1895.	1896.
England and Wales ..	20·2	19·0	19·2	16·6	18·7	17·1
Administrative County ..	20·5	18·4	20·0	17·2	19·2	17·5
Urban Districts	20·8	18·4	19·5	16·9	19·1	17·3
Rural Districts	20·1	18·5	20·5	17·7	19·4	17·7

The death-rate in the six boroughs was only 16·3 per 1,000, while in the other urban districts in the county it was 18·4. In previous years the mortality statistics of the boroughs have been more favourable than those of the other urban, or the rural, districts, a fact which is to be attributed probably to their sanitary

condition being better, and to a more efficient sanitary administration.

The highest death-rates among the urban districts were 21·8 at Seaham Harbour, 21·4 at Leadgate, and 20·7 at Durham, while among the rural districts Durham (19·8) and Chester-le-Street (19·1) had the highest death-rates.

The districts with the lowest death-rates were Stanhope (11·3), Blaydon (13·5), Darlington (14·4), and the rural districts of Hartlepool (10·4), Darlington (12·4), and Stockton (12·5).

In several districts the reduced mortality during 1896 is attributed to the sanitary improvements that have been effected during recent years, and without doubt the sanitary condition of the county generally shows a great improvement: but it is also true that the climatic conditions of the past year were from a health point of view much more favourable than those of 1895, for owing to the mild spring the mortality from chest affections was reduced, while the cold damp weather which obtained during most of the summer and early autumn was unfavourable to the development of diarrhœal diseases, which in a warm dry summer are always so fatal among young children. But for the epidemic prevalence of measles throughout the county which caused a very large mortality among young children, both the general and zymotic death-rates of the administrative county would have been very favourable.

It is gratifying to note that the percentage of uncertified deaths to total deaths declined from 4·5 to 3·9, and the number of deaths uncertified as a result of medical practice by unqualified persons also showed a considerable decrease. In some districts, however, notably in Spennymoor and some of the townships of the Chester-le-Street rural district, unqualified medical practice is still very prevalent, more than a third of the total deaths in Spennymoor during 1896 being returned as uncertified owing to such practice. There have lately been several successful prosecutions in different parts of the country of unqualified practitioners, and as the General Medical Council, as far as possible, discountenances the employment of unqualified assistants by medical men, and are in other ways endeavouring to prevent persons who are not legally qualified from practising medicine, a further decrease in the number of uncertified deaths in the county may be expected. In England and Wales the proportion of uncertified to total deaths was 2·2 per cent., while in this county it was 1·3 in the boroughs, 5·7 in the other urban districts, and 4·2 in the rural districts.

Infant Mortality.

There was a marked decrease during 1896 as compared with the previous year in the mortality among children under one year of age, for while in 1895 there were 4,976 deaths registered, last year the number was only 4,351, or a decrease of 625. The infant mortality rate, *i.e.*, the proportion of deaths

under one year to every 1,000 births, during last year for the administrative county was 160, while in 1895 it was 179. It was lowest in the boroughs (148), which is the same rate as obtained last year in the country generally, and highest in the rural districts (164), while in the non borough urban districts the rate was 162 as compared with 198 in 1895.

The highest infant mortality rates were at Leadgate (213), Seaham Harbour (212), and in the rural districts of Sunderland (193), and Chester-le-Street (182). In 1895 the rate was over 200 in 9 districts, but in only 2 districts during last year was that rate exceeded.

The decrease in the infant mortality rate last year was chiefly the result of the low temperature during the summer months which was unfavourable to the prevalence of diarrhœal diseases, usually so fatal among young children. Improper feeding, parental neglect, and insanitary surroundings, are mentioned in several reports as causes of the high infant mortality, but the medical officer of health for the Chester-le-Street rural district points out in his report that the prevalence of diarrhœa, which is one of the chief causes of a high infant mortality rate, is almost entirely dependent on the climatic conditions during the summer, an aerial poison being generated from a polluted soil when the temperature reaches a certain point, which is the exciting cause of infantile diarrhœa.

Zymotic Diseases.

The deaths from the seven chief zymotic diseases numbered 1,887, and are equal to a death-rate of 2·43 per 1,000 population, which is slightly in excess of the rate for England and Wales (2·18). In 1895 the deaths numbered 2,060, and the zymotic death-rate was 2·69.

As to the diseases which chiefly contributed to the zymotic death-rate it is to be noted that there were 574 less deaths from diarrhœa, but 563 more deaths from measles in 1896 than in the previous year. Scarlet fever, diphtheria, enteric fever, and whooping cough, were all less fatal than in 1895, the decline in the mortality from enteric fever and diphtheria being most marked. The districts with the highest zymotic death-rates were Hetton-le-Hole (5·7), Stanley (4·3), Jarrow (3·18), and the rural districts of Chester-le-Street (3·7*), Sunderland (3·3), and Durham (3·2). The lowest zymotic death-rates were 0·69 at Barnard Castle, 1·0 at Stanhope, 0·4 in Hartlepool (rural), and 1·1 in Stockton (rural). In the Barnard Castle and Middleton Divisions of the Barnard Castle rural district, and the Derwent and Stanhope Divisions of the Weardale rural district, the zymotic death-rates were also very low.

In the following table the chief vital statistics of the administrative county, and of its urban and rural districts are compared with those of England and Wales :—

* Includes deaths from Gastro Enteritis and Enteritis.

1896.	Urban Districts.	Rural Districts.	Administrative County.	England and Wales.
Birth-rate.. ..	33·9	36·5	35·0	29·7
Death-rate	17·3	17·7	17·5	17·1
Zymotic death-rate ..	2·28	2·63	2·43	2·18
Infant Mortality-rate ..	156	164	160	148
Small-pox	0·004	Nil.	0·002	0·02
Scarlet Fever	0·19	0·24	0·21	0·18
Diphtheria and Mem- branous Croup ..	0·15	0·14	0·14	0·29
“Fever” (Enteric, Con- tinued, and Typhus) ..	0·23	0·27	0·25	0·17
Measles	0·86	1·06	0·95	0·56
Whooping Cough.. ..	0·40	0·43	0·41	0·41
Diarrhœa	0·42	0·47	0·44	0·55

In my last report I had occasion to point out that in some of the reports of the district medical officers of health, the zymotic death-rate included deaths from other diseases than the seven chief zymotic diseases on which the zymotic rates given in the Registrar General's returns are calculated, in some cases deaths from erysipelas and puerperal fever being included in the zymotic death-rate, while in a few instances, diarrhœal deaths were excluded. Most of the medical officers of health have in their report for 1896 adopted the Registrar General's classification in calculating the zymotic death-rate, but in a few reports

this has not been done, and I would again point out that only deaths from the following diseases should be included in the calculation of the zymotic death-rate :—

Smallpox.

Scarlet Fever.

Diphtheria (and Membranous Croup).

“ Fever ” (including typhus, typhoid, and continued fevers).

Measles.

Whooping Cough.

Diarrhœa.

There is no doubt much to be said for the inclusion of deaths from such diseases as Puerperal Fever and Erysipelas in the zymotic death-rate, but it is desirable that in all health reports the zymotic death-rate should be strictly comparable, and the Registrar General's classification, which is recognized by the Local Government Board, should therefore be adopted.

Smallpox.

Although an outbreak of this disease occurred in the county borough of South Shields in February and March, the administrative county has been practically free from the disease, only 5 cases being reported, and one of these at Felling was probably not a case of smallpox. Of the remaining cases 2 were at West Hartlepool in April, and 1 each at Hebburn, and at Harton village in the South Shields rural district in February, the disease having probably been imported into these districts from South Shields. There were also 3 cases reported from the River Tyne Port in

January, and 1 in March. Prompt precautionary measures were taken in all the cases to prevent the disease from spreading, and the case at Hebburn was permitted to be removed to the Jarrow borough hospital for isolation. In some of the health reports the increasing number of unvaccinated children owing to the vaccination acts not being so rigidly enforced is referred to, and the medical officer of health for the Shildon urban district issues a timely and very necessary warning.

Scarlet Fever.

There was a decrease in the prevalence of this disease, the cases numbering 4,566, and the deaths 170, or 504 less cases, and 5 less deaths than in the previous year. The case mortality increased from 3·4 to 3·7 per cent., while the death-rate was equal to 0·21 per 1,000 population as compared with 0·18 for England and Wales.

The disease was again very prevalent during the greater part of the year in Stockton and Brandon and the Chester-le-Street rural district, while at Blaydon also the disease took on epidemic proportions. As in previous years many of the reports point out that the continued prevalence of this disease largely results from the ignorance and carelessness of parents as regards its danger, and emphasize the necessity for isolation of the patients. In many districts the disease was of an extremely mild type, for instance, in both Spennymoor and the Sedgefield rural district there were considerably over 100 cases notified, and yet not

a single death resulted. Without doubt the disease is often spread about by cases which are so mild as to pass unrecognized.

At Darlington, at Langleydale in the Barnard Castle rural district, and at Bishop Middleham in the Sedgfield rural district the schools were closed as a means of preventing the spread of scarlet fever, and in the reports for Darlington and Benfieldside the schools are stated to have been responsible for its spread. At Jarrow several scholars with suspicious throats were excluded by the medical officer of health from school, and no doubt much good would often result from the periodical examination of the throats of children attending the elementary schools.

In some of the reports reference is made to the difficulty that exists in persuading parents to allow their children suffering from scarlet fever to be removed to an isolation hospital, but in other districts no such difficulty is experienced, for in Darlington and Leadgate over 60 per cent. of the cases were so isolated.

Diphtheria and Membranous Croup.

It is gratifying to note that in no district in the county were these diseases seriously prevalent during the year. The death-rate decreased from 0·18 to 0·14 per 1,000, and the case mortality (23·6 per cent.), though slightly higher than in 1895 is nevertheless much below the average. The case mortality from diphtheria was only 15·7 per cent., while the death-rate was only 0·068 per 1,000 population, or less than one-

fourth that of England and Wales. The cases and deaths from diphtheria and membranous croup numbered respectively 477 and 114. For some years the death-rate from these diseases in the north of England has been much below that for the country generally, which continues to increase, and it would certainly appear as if the development and spread of diphtheria were dependent on other circumstances than insanitary conditions.

In many of the district reports the etiology of these diseases is not referred to, but in others dampness and defective drainage, effluvia from the sewer ventilators, and filthy surroundings are mentioned in connection with some of the cases. In the report for the Chester-le-Street rural district reference is made to an outbreak of illness in an institution, and while some of the cases were notified as diphtheria, others were reported as scarlet fever and erysipelas. This outbreak appears to have been caused by the milk supply. In none of the reports is any mention made of the diseases having been spread by the agency of schools, although in other parts of the country the spread of diphtheria is attributed by many to the elementary schools. In some districts it is doubtful if some of the cases notified as diphtheria were true cases of that disease, as the mortality was so small. Thus in the Auckland rural (No. 1) district only 1 of the 52 cases notified proved fatal, and in the Blaydon district there was only 1 death out of the 32 cases reported. Some of the cases

reported in the Easington rural district also appear to be doubtful. On the other hand, judging by the very high case mortality (44·7 per cent.), some of the cases of membranous croup are not notified at all, and in some districts this is undoubtedly the case as the deaths exceed the number of notifications.

Typhus Fever.

There were only 2 cases of this disease reported 1 at Felling in December, and the other at Burnhope, in the Lanchester rural district in September. The case reported from Burnhope died, but it is very doubtful if it was a case of typhus fever.

Enteric Fever.

There was a marked decrease both in the prevalence of, and the mortality from enteric fever in the administrative county during the past year. The number of cases notified was 1,133, and there were 187 deaths, as compared with 1,982 cases, and 286 deaths in 1895. The case mortality, however, was 16·5 which was slightly higher than that of the preceding year, though below that of 1894. The death-rate per 1,000 population was 0·24, or 0·13 below the rate in the administrative county during 1895, but it was again in excess of the enteric fever death-rate for England and Wales which was 0·17.

The following table gives the number of cases of enteric fever, the deaths, the case mortality and death rate during each of the months of 1896 in this county :—

Enteric Fever in Administrative County.

1896.	No. of Cases.	No. of Deaths.	Case Mortality per cent.	Death-rate per 1,000 Population per annum.
January	104	12	11·5	0·18
February	105	16	15·2	0·26
March	86	12	13·9	0·18
April	73	12	16·4	0·18
May	54	6	11·1	0·09
June	57	14	24·5	0·22
July	89	15	16·8	0·22
August	151	26	17·2	0·39
September	133	21	15·7	0·33
October	117	18	15·3	0·27
November	96	20	20·8	0·31
December	68	15	22·0	0·22
1896 ..	1133	187*	16·5	0·24

It will be noticed that the largest number of cases were notified, and the highest death-rate occurred in the month of August, after which time the disease gradually decreased both in prevalence and fatality. This is a departure from the behaviour of enteric fever

* This number does not agree with the total obtained by adding together the deaths from enteric fever (182) given in Tables A1 and B1. The above number is obtained from the monthly returns supplied to the county medical officer by the registrars, while Tables A1 and B1 are compiled from the reports of the district medical officers of health.

in previous years in the county, for during the three previous years, at any rate, the maximum prevalence of the disease has not been reached before the end of September or well into October, and it is probable that its comparatively slight prevalence in these two months of last year was the result of the cold wet weather experienced during August and September which was unfavourable to the further development of the typhoid bacillus. As in previous years the enteric fever death-rate in the non county boroughs was considerably below that of the other districts in the county, being only 0·18, while in the other urban districts it was 0·27. and in the rural districts 0·25 per 1,000 population. In none of the districts in the county did the typhoid death-rate reach 1·0 per 1,000, the highest rates being 0·62 in Blaydon, 0·74 in Houghton-le-Spring, and 0·70 and 0·46 in the rural districts of Houghton (Northern Division) and Auckland (No. 1 Division) respectively. Among the places where the incidence of the disease was marked during some part of the year may be mentioned Blaydon, where it was probably caused by a pollution of the water supply ; Bishop Auckland (in November) where the water supply is obtained from a polluted source ; Houghton-le-Spring and part of the Houghton rural district, where the water supply is liable to intermittent pollution, and where excremental nuisances and defects of sewer ventilation may have, in some cases, caused the disease ; Ryhope and Hylton in the Sunderland rural district, caused probably by defective sewerage and insanitary outoffices ; Trimdon

in the Sedgefield rural district where grossly insanitary conditions existed ; Riseburn and Coundon Grange in the Auckland rural district, where the disease was attributed to insanitary conveniences, nuisances from the sewers, and possibly to the houses having been built on " made " ground at Coundon ; and at Chester-le-Street.

At Jarrow and Houghton-le-Spring cases of enteric fever are mentioned as probably resulting from the eating of shellfish, but in the majority of the reports, where the subject is discussed, the disease is attributed to insanitary conditions arising from defective drainage or midden-privies, the middens often being a means of spreading the disease when they have become infected with the undisinfected excreta of a typhoid patient. In some of the reports the decrease in the prevalence of enteric fever is attributed to improved sanitary conditions, but other medical officers of health attach greater importance to the climatic conditions of the past summer as a cause of its diminished prevalence.

In several districts air-tight galvanized iron pails containing a strong disinfectant have been supplied to all houses where cases of enteric fever occurred, for the reception of the excreta of the patients, the pails being frequently removed, and their contents properly disposed of by the local authority. In all the districts where these pails have been used the medical officer of health reports on their value as a means of preventing the spread of enteric fever, and without doubt, if they are properly attended to their use must be of the

greatest benefit, especially in districts where the midden privy is the chief means of excrement disposal.

Continued Fever.

There were 136 cases of this disease reported, and 8 deaths occurred. 63 of the cases and 2 of the deaths occurred in the Easington rural district, and it is highly probable that most of the patients were suffering from mild attacks of enteric fever. The maximum prevalence of the disease was in September, but the case mortality was much lower than that of enteric fever.

Puerperal Fever.

The number of cases reported was 81, and there were 52 deaths, the case mortality being very high. Its mortality was most marked from November to March, and was greatest in the urban districts. Dr. Renton attributes a death from puerperal fever at Benfieldside to the infection being carried by a visitor from a case of erysipelas. It is very doubtful if any advantage results from the notification of puerperal fever under present circumstances, for it is certain that many cases of septic poisoning after parturition are never notified, while practically no supervision is exercised by the officers of the local authority with regard to the cases that are reported.

Measles.

As regards this disease the past year exhibited a marked contrast with 1895, and further showed its tendency to become prevalent every second year. During 1896 measles was epidemic in nearly every

district in the county, and the mortality was excessive, the deaths numbering 737, equal to a death-rate of 0·95 per 1,000, as compared with 174 deaths, and a death-rate of 0·22 in 1895. For England and Wales the death-rate was 0·56, which, though above the average, was only a little more than half that for this administrative county.

The following table gives the deaths and death-rate from measles during the last six years, and it will be seen that the mortality during 1896 was higher than in any of the previous 5 years :—

	Administrative County.					
	1891.	1892.	1893.	1894.	1895.	1896.
Deaths from Measles ..	199	591	284	512	174	737
Death-rate from Measles } per 1,000 population .. }	0·27	0·80	0·38	0·67	0·22	0·95

The rapidity with which the infection of measles spread through the county was very striking. In January the disease was practically confined to an area embracing the Auckland, Durham, and Sedgefield Unions about Spennymoor, and to Southwick. In February the disease spread to Sunderland, evidently from Southwick, and in the next few months that borough became a centre of infection to the adjoining rural district of Sunderland. In March the disease invaded the Chester-le-Street rural district, probably from the Durham rural district, and in the following month it appeared in West Hartlepool, rapidly spreading from there to the other boroughs on

Teesside. In May the disease became epidemic in Leadgate and Hetton-le-Hole, rapidly spreading to the other portion of the Lanchester and Houghton unions, and into the Easington rural district. It was not until July that the disease made any headway in the borough of South Shields, but from there it apparently extended to the other towns on Tyneside, and during the last quarter of the year became epidemic in Jarrow, Hebburn, and Felling. By the end of the year the disease was fast dying out in most districts, and it is very probable that the mortality from measles in the county during 1897 will be very small.

The facility with which measles spreads is due to its extreme infectiousness especially in its early stages before the rash appears, and therefore before the presence of the disease is suspected. Other circumstances conducing to its spread are the carelessness and neglect of parents who often have very little dread of it and rarely attempt to isolate the first case in the family from the other children, and the aggregation of young children in schools. In many districts in the county the schools were closed during the past year with the object of limiting the spread of measles, but in some places this action does not appear to have appreciably affected the progress of the epidemic. In some of the reports the notification of measles, or of the first case occurring in a house, is recommended, but the experience of Darlington, Jarrow, and other districts in the county where notification of measles has been tried is not encouraging, and I should myself hesitate

to recommend the inclusion of this disease among the notifiable diseases, unless means were first provided for isolating the cases, and the sanitary staff so increased that all the cases notified could be kept under constant supervision. The medical officer of health for Jarrow points out that in that town measles has of late years been epidemic annually instead of biennially as in other districts.

Although the prevention of the spread of measles through a district is very difficult, the mortality from it might be very largely reduced if parents would only recognise the importance of keeping the patients in doors, and of avoiding exposure to cold for at least three weeks from the onset of the disease. Measles itself is rarely fatal if proper precautions are observed, nearly all the deaths resulting from lung complications, which follow exposure to cold or other neglect.

Whooping Cough.

The deaths from this disease numbered 322 or 27 less than in the previous year, and were equal to a death-rate of 0·41 per 1,000, which was exactly the same rate that obtained for England and Wales. The disease was most fatal in Jarrow, Stockton, Hetton-le-Hole, and the Auckland (No. 2), Durham and Sunderland rural districts. Its period of greatest prevalence was from March to May, the fewest deaths occurring during the winter months. As is the case with measles most of the deaths attributed to whooping cough result from lung complications, and many of them might be avoided, if proper care and attention were given to the patients.

Diarrhœa.

There was a great decrease in the mortality from this disease, the deaths numbering 346, equal to a death-rate of 0·44 per 1,000, which is considerably lower than the rate for the country generally (0·55). In 1895 the deaths numbered 920, and the death-rate was 1·20 per 1,000. The districts with the highest death-rates from this disease during 1896 were Blaydon (0·97), Spennymoor (1·00), and the rural districts of Sunderland (0·88), and Easington (0·65). In addition to the deaths from diarrhœa there were 371 deaths from enteritis and gastro-enteritis, and the medical officer of health for the Chester-le-Street rural district includes such deaths in his zymotic death-rate. There is much to be said in favour of including such deaths under the head of diarrhœa, for they almost entirely occur among young children during the summer months, when infantile or summer diarrhœa is most prevalent, and one medical man would return a death as resulting from "diarrhœa" which another one would certify as "enteritis." The great majority of the diarrhœal deaths occurred during July and August (217), its period of maximum prevalence being much earlier than in previous years. It has long been proved that the epidemic prevalence of diarrhœa is dependent very largely on the weather, varying directly with the heat experienced during the summer months, and without doubt the small mortality from diarrhœa during last summer was chiefly the consequence of the cold wet weather of August and September, although the many

sanitary improvements effected in many parts of the county of late years have also had a beneficial effect.

Infectious Diseases Notification Act.

The Southwick urban and the Weardale rural districts adopted this act during the past year, and it is now in force in every district in the county, with the two following exceptions :—

Bishop Auckland Urban District (pop., 1891, 10,527).
 Stanhope Urban District (pop. 1891, 1,864).

It is much to be regretted that the Councils of these districts have as yet refused to adopt the recommendations of their medical officer of health and of the Local Government Board to adopt the Act, for not only is the information derived from notification of great value in assisting the precautionary measures taken against infection, but until every district has adopted the Act, the registration of infectious disease in the county must be incomplete.

An objection is often urged to the adoption of the act on the ground of expense, but I would point out that the cost of adopting it in Bishop Auckland and Stanhope would not, on the average, exceed £14 and £2 respectively each year.

The cost of notification during 1896 in the administrative county was £1 3s. 6d. per 1,000 population of the districts in which the act was in operation, as compared with £1 10s. 5d. in 1895, and £1 7s. 9d. in 1894.

The following table gives the number of cases of the notifiable infectious diseases reported during each month of 1896 in the administrative county, and compared with the similar table for 1895, it may be noted that for each of the first six months the number of cases was considerably in excess, while for each month in the second half year, 1896, compared very favourably with its predecessor. In 1896 there were 1,545 fewer cases notified than in the previous year, owing chiefly to the diminished prevalence of enteric and scarlet fevers.

	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.
Small-pox ..	3	4	1	3	..	..	..	..	..	..	..	..	11
Scarlet Fever ..	563	471	481	443	387	292	299	241	322	362	415	290	4566
Diphtheria ..	47	46	47	26	25	24	18	21	13	31	24	21	343
Membranous Croup ..	11	16	18	12	4	12	12	8	7	10	8	16	134
Typhus Fever ..	..	..	..	..	..	..	..	..	1	..	..	1	2
Enteric or Typhoid Fever	104	105	86	73	54	57	89	151	133	117	96	68	1133
Relapsing Fever ..	1	..	..	1	..	..	..	..	..	..	..	..	2
Continued Fever ..	11	4	18	7	15	4	8	12	25	13	11	8	136
Puerperal Fever ..	9	9	10	8	6	5	2	3	6	4	9	10	81
Cholera ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Erysipelas ..	73	54	95	60	51	61	56	68	82	87	81	61	829
TOTALS ..	822	709	756	633	542	455	484	504	589	624	644	475	7237

Isolation Hospital Accommodation.

An enquiry was held at Bishop Auckland, on 16th December, by one of the medical inspectors of the Local Government Board, respecting an application by the Shildon and Willington urban and the Auckland rural districts, for the formation of these districts into a joint hospital district. There was no opposition to the proposal, and it is probable that the necessary order will be made, though up to the end of the year the Board had not given its decision. The population of this proposed joint district is nearly 80,000, and it is to be regretted that the urban districts of Spennymoor and Bishop Auckland are not also included in it.

The Lanchester Joint Hospital Board have decided to erect another isolation hospital near Tanfield, for the accommodation of patients from the Stanley, Annfield Plain, and Tanfield urban districts, and they have also carried out extensive improvements to their hospital at Leadgate, which include the erection of a proper steam disinfecting apparatus.

The Hebburn District Council are also about to erect a permanent hospital for their district, and have purchased an additional acre of land for that purpose. Plans for a new administrative block, ward pavilion, discharging room, &c., have been adopted, and have been submitted to the Local Government Board for approval. The Easington Rural District Council have decided to erect an isolation hospital near Easington, but it is to be constructed of corrugated

iron and wood—materials which in many respects are not suitable for isolation hospitals—and will, according to the adopted plans, contain only 2 wards capable of accommodating about 10 patients, and only one disease can be treated in the hospital at a time.

The Sunderland Rural District Council have been negotiating with the Corporation of Sunderland for the use of the borough hospital for their infectious cases, and have not yet provided any hospital of their own. Some of the infectious cases were removed to the borough hospital from the rural district during the past year, but the Rural Authority have as yet come to no definite arrangement with the Corporation as to the future use of their isolation hospital. The Houghton Urban District Council have had the question of providing a hospital before them, but they have not yet decided on the site, and the district is still without any hospital accommodation, which is much needed.

The following districts in the county were, at the end of 1896, without any proper means of isolating their infectious cases :—

Urban.

Felling.
Houghton-le-Spring.
Ryton.
Shildon and East Thicky.
Spennymoor.
Stanhope.
Towlaw.
Whickham.
Willington.

Rural.

Auckland.
Barnard Castle.
Sedgefield.
South Shields.
Sunderland.
Weardale.

In several other districts the accommodation provided is insufficient or otherwise not satisfactory.

Water Supply.

The Local Government Board in June last informed the Urban District Council of Bishop Auckland that they could not sanction their application for a loan of £9,275 for the purpose of improving the water supply of that town, which is drawn from the river Wear after it has received the unpurified sewage of a population numbering several thousand. It will be remembered that the application of the District Council was opposed by the County Council, and the following extract from the letter of the Local Government Board to the District Council refusing their application is of much interest, as showing the opinion the Board has of the quality of a drinking water such as that at present used by the town of Bishop Auckland: "The Board, however, are advised that the conditions "to which river Wear water has been subjected before "its arrival at the intakes are of such a character as to "render it quite unsafe to rely upon any system of filtration for removal of its dangerous properties. " They are of opinion that in the interests of the "Public Health, the District Council should abandon "the existing works for the abstraction of water from the "river Wear, and should arrange for a supply of water "from the Weardale and Shildon Water Company." Up to the end of the year the District Council had taken no steps to carry out the recommendation of the Local Government Board.

During the year a large population in the county was supplied with pure water, including Toft Hill and Lands Bank in the Auckland rural district, Eighton Banks, High Usworth, and Springwell, and Low Flatts, in the Chester-le-Street rural district, and Wingate and Station Lane in the Easington rural district. An application by the Council of the latter district for the sanction of the Local Government Board to a scheme for supplying Castle Eden with water was not granted.

At Ludworth and Cassop Colliery in the Durham rural district the distribution of the supplies has been much improved. Schemes are in progress for supplying a proper drinking water to several places in the Lamesley and Washington Townships of the Chester-le-Street Union, and to Wingate Lane and High Wheatley Hill in the Easington rural district, while a better distributed supply is being laid into High Heworth Colliery in the Felling urban district.

The condition of the river Tees above the intake of the Darlington water supply has been considerably improved during the year by the prevention of much of the sewage pollution at Barnard Castle, and other sewage disposal schemes are in progress which will further reduce the dangerous pollution of that river on the Durham side ; though practically nothing has been done to prevent the pollution that occurs from the villages on the Yorkshire side of the river. Nothing has yet been done to prevent the serious pollution of the Stanley Burn—from which the drinking water to part of the town of Chester-le-Street is taken—by the

sewage from South Moor and district, and there has been much delay in carrying out the necessary sewage disposal works.

Other places where the water supply is liable to pollution are Blaydon Haughs in the Blaydon rural district ; Houghton-le-Spring and part of the Houghton rural district ; Lumley and Fatfield in the Chester-le-Street rural district ; some of the villages supplied from wells in the Darlington rural district ; and Tunstall and Ford in the Sunderland rural district.

At Brandon village in the Brandon urban district ; Firtree, Low Lands, Storey Lodge, and the townships of Lynesack and Softley in the Auckland rural district ; Wheatley Hill Colliery in the Easington rural district ; and Warden Law in the Houghton rural district, the supply is either insufficient or not properly distributed ; in some of these places it is also liable to pollution, and better supplies are much needed.

Housing of the Working Classes.

This subject is referred to by many of the medical officers of health, and in an increasing number of districts it has been brought before the notice of the local authority, with the result that many insanitary houses have either been closed, or put into habitable condition. In only a few instances have the County Council had to take action under the Housing of the Working Classes Act during the last year, as a result of the default of the local authority, and of late years a very marked improvement has been effected, not only in the dwellings themselves, but also in their environments, in many districts.

There is still, however, much need for improvement in the older houses in the county. In many districts houses, in some cases without through ventilation, containing only 1 room downstairs and an unceiled, unventilated attic above, are occupied by families, with the result that over-crowding and other unhealthy conditions result. Separation of the sexes, and the observance of the ordinary laws of decency, are almost impossible in such dwellings, which, whether judged from the standpoint of health or morals, are not fitted for the housing of a family.

In some districts there is considerable over-crowding of many of the houses, owing to the good state of trade and the scarcity of workmen's dwellings.

In several of the health reports, the importance of building new houses, with damp-proof courses, and on a site rendered impervious to the passage of ground air or moisture into them, is pointed out. In a number of districts these requirements are not carried out, owing to the want of proper building and sanitary bye-laws, or to their not being properly enforced. Some of the medical officers of health again refer to dampness of houses resulting from want of proper spouting, though in many districts much progress has been made towards remedying this defect.

Excrement Disposal and Removal.

In many districts, especially in the boroughs, the work of substituting water-closets or small ash-closets for the insanitary and objectionable midden-prives, made good progress during the past year. In a number

of the reports the old-fashioned middens are referred to as the cause of many of the nuisances and much of the zymotic illness that occurred, the medical officers of health of Darlington, Bishop Auckland, and the Easington rural district, especially referring to them as a cause or means of spread of enteric fever.

In some districts the means of excrement disposal are particularly insanitary; thus in the colliery district of Hebburn over 200 of the middens are stated to be on an average within 4 feet 2 inches of the dwellings, and in some of the rural districts similar conditions exist to my knowledge.

As I have pointed out in previous reports, the excessive prevalence of enteric fever and diarrhœa in this county is to no small extent a result of the pollution of the subsoil and air about dwellings by the percolations and emanations from foul midden-privies, and it is much to be regretted that their erection in any form is still permitted, at any rate in populous districts. If the model bye-laws issued by the Local Government Board were adopted and *enforced* in every district, the erection of the large objectionable ashpit-privies could no longer occur.

In many districts in the county the work of scavenging and the removal of house refuse has of late years been undertaken or contracted for by the Sanitary Authority, and as a result it has been much more satisfactorily performed.

In the populous portions of the Auckland rural district, for the scavenging of which a compulsory

order was made in 1895 by the Local Government Board, under sect. 42 of the Public Health Act, 1875, much benefit has resulted from the District Council having contracted for the scavenging, and there has been a marked reduction in the number of nuisances resulting from filth accumulations. The Local Government Board, at the instance of the County Council, held another similar enquiry last September as regards the townships of Cornforth, Chilton, Ferryhill, and Sedgefield, in the Sedgefield rural districts, and they subsequently issued an order for the scavenging of these townships by the District Council.

In several of the smaller urban districts the local Authority does not hold itself responsible for the scavenging, this duty being left to the owners or occupiers, with as a rule, very unsatisfactory results, and in the reports for Benfieldside, Leadgate, Consett, and Willington, the District Councils are urged to carry out the scavenging and refuse removal. In Darlington, Shildon, and the Houghton (S) and South Shields rural districts, where the scavenging is undertaken by the Local Authority, more frequent emptying of the out-offices is recommended by the medical officers of health. The Easington Rural District Council, which last year tried the experiment of undertaking the scavenging of one of their townships, have decided to carry out the work in three other populous townships. In the Chester-le-Street rural district the out-offices are stated to be frequently neglected in those districts where the removal of refuse is not undertaken

or contracted for by the District Council. The Lancaster Rural District Council do not undertake the scavenging in any part of their district, and in many of the populous townships the work is so badly performed, that it is very desirable they should perform the work.

House Drainage, Sewerage, and Sewage Disposal.

In most districts the house drains are now trapped with earthenware syphon traps, which have largely displaced the various metal traps on which reliance cannot be placed. Many of the new traps are, however, not self-cleansing, and offensive refuse is apt to accumulate in them, so that unless they are periodically cleaned out, they become, not only a nuisance, but also blocked up. It is most important that the traps of all house drains should be self-cleansing, and no trap which allows of the accumulation of solid matter within it should be sanctioned by a sanitary authority or its officers.

In some of the purely rural villages the house drains and their traps are still very defective, and in other districts it is to be feared that the joints of the house drains and their connections with the sewer are only made with clay, instead of with cement or other similar material. Another common cause of nuisance in connection with the house drains is that the ground round the trap is not paved or cemented, so that slops lie about the trap and the ground gradually becomes polluted, giving off offensive emanations especially in warm weather. In some villages open channels,

often of very defective construction, and discharging into covered drains through untrapped openings, are still the only means of drainage, and are a constant source of nuisance.

In several districts—especially in the rural districts—considerable additions or improvements to the sewers have been made. In the rural districts of Barnard Castle (Middleton), Auckland (Witton Park), Chester-le-Street (Portobello), Easington (High Wheatley Hill and Davy Lamp), Lanchester (Hamsterley, &c.), and Sedgefield, a number of villages have either been sewered or defective drains have been replaced by proper pipe sewers, and in other districts similar work on a smaller scale has been completed or is in progress. A new system of sewerage appears to be needed at West Hartlepool; and in several other reports, notably those for Stockton, Consett, Houghton, and the rural districts of Auckland (Crook), Chester-le-Street (Lumley), and Lanchester (several villages), defects of sewerage are noted.

In a large number of districts the question of the disposal of the sewage so as to avoid the pollution of watercourses has been under consideration, but except in a few instances very little practical progress has been made during the past year. Satisfactory sewage disposal works have been completed at Barnard Castle, and at Croniwell (for portions of the Blaydon urban and the Lanchester rural districts), and similar works are in course of construction for some of the villages in the Barnard Castle rural district, which at present

pollute the river Tees. Nothing, however, was done during the year to prevent the pollution by sewage of the river Wear, though in most instances plans have been prepared for that purpose, and in some districts received much consideration. The proposed sewage disposal works for the town of Bishop Auckland, which had been sanctioned by the Local Government Board, have had to be abandoned, owing to subsidences from colliery workings; and the Durham Corporation are considering a cheaper and more modified scheme for their city than that originally proposed. At Leadgate, Stanley, Tanfield, and several villages in the rural districts of Chester-le-Street, Easington, Lanchester, and Sedgefield, works for the proper disposal of the sewage are much needed, if the pollution of our water-courses is to be prevented.

Work of Inspectors of Nuisances.

As in previous years, the inspectors of nuisances have kindly forwarded to me returns of the sanitary work done in their districts, and these have been tabulated at the end of the summary. Many of the returns give very valuable information, and indicate much arduous work by the inspector on behalf of the public health. Some of the returns are, however, very incomplete, and would appear to indicate a want of system either in the performance of the inspectorial duties or in the keeping of the office books. It will be noticed from the tables that the majority of the notices served for the abatement of nuisances were of an informal character, i.e., not served by the order of the

District Council. It appears to me that it would be better and would strengthen the hands of the inspector if more formal notices were served and compliance with them more strictly enforced.

Additional inspectors were appointed during the year for the populous rural districts of Easington and Sedgefield, to the sanitary requirements of which districts it is quite impossible for one inspector to attend.

Cowsheds, Dairies, and Milkshops.

The housing of milk cows and the means of storage of the milk are referred to in the majority of the reports, and in some districts considerable improvement appears to have been effected in the cowsheds, notably in Leadgate and the rural district of Stockton. In a considerable number of districts, however, neither the cowsheds nor milkshops are registered, and there are no regulations in force respecting such places, and therefore very little sanitary control can be exercised over the milk trade. In some of the reports the need of better lighting and ventilation of the byres is pointed out, and in others reference is made to the importance of boiling all milk used by children so as to minimise the liability to tuberculosis and infantile diarrhoea. In only one report (Chester-le-Street) is the milk regarded as a likely cause of any of the outbreaks of infectious disease which occurred in the county, but an outbreak of illness in the County Industrial School at the beginning of the year probably was connected with the milk supply from a particular cow.

Milk is such an important food and so largely used, especially by children, that every sanitary precaution should be taken to ensure its purity, and every cowshed and place where milk is stored should be registered, systematically inspected by the sanitary officials, and kept in accordance with regulations which the District Council have power to adopt.

Slaughterhouses.

In a number of the reports no reference is made to these structures or to their having been periodically inspected, though in several districts they are registered and appear to receive systematic attention.

In the reports for West Hartlepool and Houghton-le-Spring reference is made to the question of the compensation to butchers for the destruction by the local authority of carcasses which have been attacked by tuberculosis; and in some cases, unless compensation is paid, the butcher, for the public good and through no fault of his own, suffers considerable hardship.

Factories and Workshops.

No action with regard to these buildings is recorded in any of the health reports, although the sanitary supervision of them to some extent is required of the local sanitary authority.

Bye-laws.

New building and sanitary bye-laws have been framed for the borough of Stockton and are now before the Local Government Board for their approval, and

sanitary bye-laws have also been framed for the Seaham Harbour urban district. The bye-laws of the Sunderland rural district are being re-cast and brought more in accordance with the requirements of the present day. Several districts, however, are still without any proper sanitary or building bye-laws, and consequently the local authorities of such districts have placed themselves at a great disadvantage in the management of matters sanitary.

Appended to this report are coloured charts showing the monthly mortality in the administrative county from the chief zymotic diseases, and at the end of the summary are tables relating to the vital statistics and other matters of interest in the various sanitary districts.

TABLE SHEWING THE NUMBER OF BIRTHS, DEATHS, AND DEATHS FROM THE CHIEF
ZYMOTIC DISEASES IN THE ADMINISTRATIVE COUNTY OF DURHAM,
DURING EACH OF THE MONTHS OF 1896.

	Births.	Deaths.	Deaths under 1 year.	Total Zymotic Deaths.	Small-pox	Scarlet Fever.	Diphtheria and Mem- branous Croup.	Fevers, (Enteric, Continued, & Typhus)	Measles.	Whooping Cough.	Diarrhea
January..	2245	949	263	97	..	19	8	14	36	18	2
February	2084	1047	301	131	1	28	18	16	34	22	12
March ..	2294	1115	351	139	..	14	16	13	46	40	10
April ..	2299	1021	316	91	1	11	7	12	19	29	12
May ..	2139	1134	314	137	..	20	7	7	56	35	12
June ..	2445	1157	324	200	..	11	17	14	111	26	21
July ..	2271	1240	441	249	..	11	7	16	102	29	84
August ..	2298	1168	458	232	..	16	4	28	59	28	97
September	2262	1139	402	172	..	12	3	23	58	25	51
October ..	2412	1172	394	160	..	11	6	18	82	21	22
November	2275	1213	387	156	..	11	13	20	81	20	11
December	2163	1251	400	123	..	6	8	15	53	29	12

CHART SHEWING NUMBER OF DEATHS DURING EACH MONTH OF 1896 FROM TOTAL ZYMOTIC DISEASES, AND FROM ENTERIC AND CONTINUED FEVERS, AND DIARRHOEA, IN THE ADMINISTRATIVE COUNTY OF DURHAM.

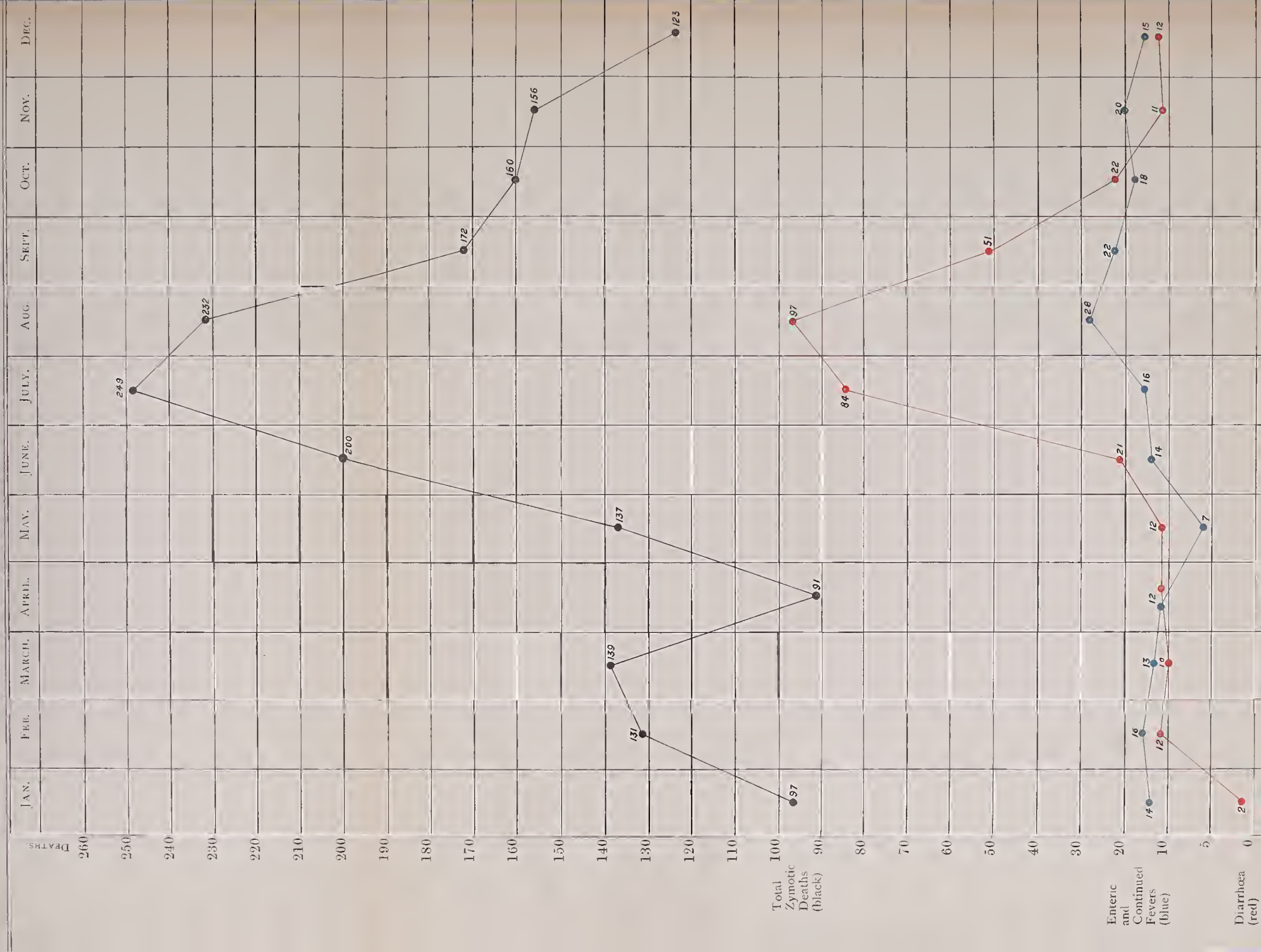
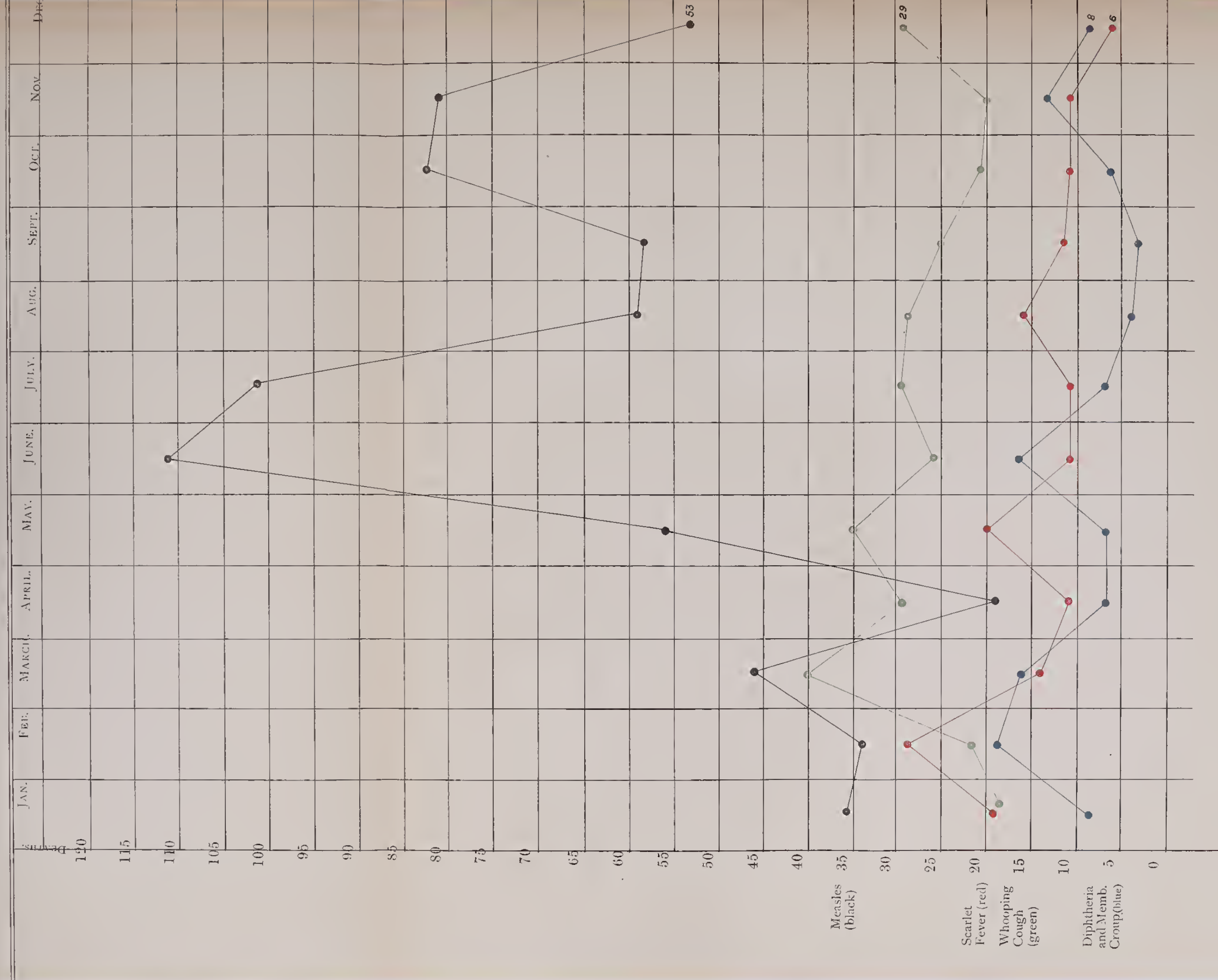




CHART SHEWING NUMBER OF DEATHS DURING EACH MONTH OF 1896 FROM SCARLET FEVER,
DIPHTHERIA AND MEMBRANOUS CROUP, MEASLES, AND WHOOPING COUGH,
IN THE ADMINISTRATIVE COUNTY OF DURHAM.



BOROUGH S.

DARLINGTON.

JAMES LAWRENCE, M.D., Medical Officer of Health.

Area in Acres, 3,945. Estimated Population, 1896, 41,000.

Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
28·0	14·4	1·66	133
Phthisis death-rate, 1·2.		Respiratory diseases death-rate, 1·8.	

All the above mortality statistics are very satisfactory and compare favourably with those of previous years. For the first half of the year the death-rate was very low, only 12·8 per 1,000 population.

Infectious Diseases.

There were 146 more cases notified than in the previous year owing to the epidemic prevalence of scarlet fever, and there were 268 cases of this disease reported as compared with 71 in 1895. The deaths numbered 15, and 12 of them were those of children under 5 years. In March and April the disease was so virulent that it was necessary to close the schools, and this action had the effect of checking its spread. Owing to the prevalence of measles the schools were closed for the summer holidays earlier than usual, and Dr. Lawrence says that without doubt scarlet fever and measles are spread at the schools, owing to the attendance there of mild and unrecognized cases. There

were 27 cases of enteric fever (6 deaths), and half of the cases occurred during the last quarter of the year. The number of cases treated in the isolation hospital was 192 of which 174 were scarlet fever. The 2 cases of diphtheria which were isolated were treated with diphtheria antitoxin, and both recovered.

General Sanitation.

A large amount of sanitary work was accomplished during the year, more especially as regards the paving of yards, and the means of excrement disposal. A number of midden privies have been altered during the year, and Dr. Lawrence again calls attention to the importance of abolishing the old deep midden privies with as little delay as possible, and he points out the advantages of the adoption of the water carriage system of excrement disposal, especially in the older and more populous parts of the town, respecting which he says, "It is most desirable that in these situations all excrementitious matter should be removed before it has time to decompose. To allow large privies and ashpits to remain in the middle of a thickly populated district is a likely way to spread summer diarrhœa, and probably also enteric fever." He also recommends that the ashpits should be scavenged more frequently than at present.

The dairies and milkshops have been inspected, and the bye-laws regulating them observed. The desirability of boiling all milk before consuming it is pointed out owing to the possibility of raw milk carrying the germs of tuberculosis. The slaughter houses have

all been regularly inspected, and the importance of such inspection is insisted upon.

A small quantity of unsound meat and fruit was condemned during the year, but no prosecutions were necessary. Under the Food and Drugs Act, 11 samples of milk were analysed, and 3 were of doubtful quality, and 1 was deficient in fat. Legal proceedings were taken against the vendor of the sample deficient in fat, but the justices refused to convict owing to the absence of any government standard as to the amount of fatty matter in milk. 12 Samples of spirits were analysed, and 3 of these were adulterated with water. Legal proceedings were taken in the worst case, and the vendor was fined. The number of nuisances abated during the year was 970.

Sanitary Requirements.

The recommendations in the report as to the abolition of the old insanitary midden privies and more frequent scavenging should be adopted.

DURHAM.

A. M. VANN, M.R.C.S., Medical Officer of Health.

Area in Acres, 880. Estimated Population, 1896, 15,000.

Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
28·5	20·7	1·6	170

Phthisis death-rate, 1·4. Respiratory diseases death-rate, 5·8.

Compared with the previous year there is a decrease in both the general death-rate and infant mortality-rate, but they are nevertheless still high. The death-rate from acute lung diseases was again very high

and largely accounts for the comparatively high death-rate. Dr. Vann deprecates the increasing tendency to feed infants on artificial foods, which he thinks are largely responsible for the high infant mortality.

Infectious Diseases.

There were only 64 cases notified as against 167 in 1895, the cases of scarlet fever only numbering 35, as against 129 in the previous year, while the cases of enteric fever decreased from 24 to 12. All the 3 cases of diphtheria notified ended fatally, as did also 2 of the cases of scarlet fever and 1 of enteric fever. The number of cases isolated in the hospital was 12, as compared with 61 in 1895. During the summer measles was epidemic in most parts of the town, and it was found advisable to close the Infant Model School for three weeks owing to its prevalence. There were altogether 13 deaths from measles, and Dr. Vann urges the importance of the greatest care being taken with the patient in even the mildest cases of the disease owing to the liability to fatal lung complications. The use of compressed sulphur dioxide gas for the fumigation of rooms, in place of burning sulphur cakes, is recommended in the report. The town is without any efficient disinfecting apparatus.

General Sanitation.

The abolition of the old objectionable ashpit privies has been continued during the year, and 11 water closets have been provided in their place. The report again refers to the difficulty there is in getting some tenants to properly use the water closets. Several

dwellings have been dealt with under the Housing of the Working Classes Act, and these have been closed, while several others have been made habitable. Several persons were successfully prosecuted for depositing refuse on the river banks. The water supply of the town has been good both as regards quantity and quality. The water of one well in Framwellgate was analysed, "but although I have many reasons for doubting the purity of the water, the result of the analysis was so far confirmatory of the potability of the water that it was considered impossible to take any further steps in the matter." The cowsheds, slaughter houses, and lodging houses, are stated to have been kept under constant supervision.

Sanitary Requirements.

1. A proper steam disinfecting apparatus.
2. Persons who foul or otherwise improperly use water closets used in common should be prosecuted under Sect. 21 of the Public Health Acts Amendment Act.

HARTLEPOOL.

J. RAWLINGS, M.R.C.S., Medical Officer of Health.

Area in Acres, 552. Estimated Population, 1896, 24,500.

Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
31·8	16·9	2·4	131

Phthisis death-rate, 1·6. Respiratory diseases death-rate, 2·5.

The above statistics are satisfactory, the general death-rate and infant mortality-rate comparing favourably with those of 1895, and but for a fatal epidemic of measles the zymotic rate would have been very low.

Infectious Diseases.

The number of cases notified was 66, or only about one-third the number notified in 1895, the decrease being especially marked as regards the scarlet fever cases, of which only 16 were reported, as compared with 117 in the previous year. There were 24 cases of enteric fever (6 deaths), and at most of the infected houses some defect of drainage or other insanitary condition is stated to have been found. No case of enteric fever was traced to impure milk or water. There were 7 cases of diphtheria, and "in nearly all" the cases complaints were made of the escape of foul "effluvia from the street gratings in the immediate neighbourhood." Measles was very severely epidemic during the autumn, causing 38 deaths, and Dr. Rawlings thinks that the elementary schools are the chief factors in the spread of the disease. Four cases of enteric fever were treated in the port sanitary hospital.

General Sanitation.

Seven houses were closed as unfit for habitation, and 89 privies and 58 ashpits were abolished during the year. The licenses of two common lodging-houses were withdrawn. A quantity of unsound food was destroyed, and the suggestion is made in the report that by a system of inspection of the food and meat supply some reduction in the mortality from tuberculous diseases might be effected. Of the 38 samples analysed under the Food and Drugs Acts, one sample of milk was found to be adulterated, and the offender was fined.

Sanitary Requirements.

1. The report advises the compulsory notification of measles, as the only means of controlling the disease is by taking proper precaution when the first few cases occur.

2. The provision of a proper disinfecting apparatus in a suitable position is recommended, as the taking of all infected articles to the port sanitary hospital is stated to be most inconvenient and undesirable.

JARROW-ON-TYNE.

J. M. NICOLL, M.B., Medical Officer of Health.

Area in Acres, 728.

Estimated Population, 1896, 37,000.

Birth-rate.

Death-rate.

Zymotic death-rate.

Infant Mortality-rate.

28·3

17·3

3·18

179

Phthisis death-rate, 1·2.

Respiratory diseases death-rate, 2·9.

The birth-rate was very low, in fact the lowest recorded in the Borough, and there were fewer births registered than in any year since 1880. The general death-rate was 1·0 per 1,000 lower than in the previous year, and considerably below the average of previous years. The death-rate was highest in the 4th quarter, and in the North and East wards of the town. The zymotic death-rate and the infant mortality-rate were both high, which unfavourable fact is largely to be attributed to the high mortality from measles, whooping cough, and diarrhœa.

Infectious Diseases.

There were 337 cases notified, or 12 less than last year, scarlet and enteric fevers being somewhat more prevalent, while there was a decrease in the

number of cases of diphtheria and erysipelas. Scarlet fever was the most prevalent disease (219 cases), and the cases appear to have been fairly distributed over the town. The disease did not attach itself to any particular schools, as in the previous year. Several scholars with suspicious throats were excluded from school attendance, as a result of visits paid by the medical officer of health to the schools.

There were 66 cases of enteric fever, or 16 more than in 1895. The most cases occurred in the Central and East wards, where "the sanitary surroundings were found most defective, and most likely to lead, directly or indirectly, to the development of the disease." Defects of drainage, allowing sewer gas to pass into the houses and yards; the pollution of the soil by insanitary privy middens; and possibly also the consumption of infected shell fish, are given as causes of the disease; and the importance of boiling the milk and water is pointed out, although no case was traced to the drinking of infected water or milk during the year. Diphtheria was responsible for 26 cases and 8 deaths, and the most common factor in connection with the cases was filthy surroundings. Dampness of the surroundings and humidity of the atmosphere are also mentioned as predisposing causes. Measles was especially prevalent during the latter part of the year, causing 47 deaths, the victims being mostly children aged between 1 and 2 years. At first the disease was of a mild type, no death occurring till the middle of September, and it was kept in check by the school

authorities, on the advice of the health department, excluding scholars from infected houses from school. During October the epidemic considerably abated, but in the following month there was a marked recrudescence, and it became necessary during the next two months to close the infant departments of all the elementary schools. "After the schools were closed the epidemic abated, but how far the closure influenced this it is rather difficult to say, owing to the fact that the epidemic under ordinary circumstances could not have lasted much longer. I dare say it, however, did expedite the end."

Valuable information was given to the Sanitary Authority by the school authorities notifying the cases which came to their notice. The report states that school closure, to be effective, must be prompt.

Dr. Nicoll points out a very serious fact—that measles of late years in Jarrow has been epidemic every year, instead of biennially, as in most other districts, and this has had the effect of greatly increasing the mortality from the disease. The reason for this change in the prevalence of the disease in Jarrow is difficult to understand, and requires careful investigation, for in few towns are greater precautionary measures taken to prevent its spread. Whooping cough caused 27 deaths, and diarrhœa 17, the mortality from the latter being much below the average.

77 per cent. of the zymotic deaths resulted from measles, whooping cough and diarrhœa. The number of cases removed to the isolation hospital was

105, or considerably over 30 per cent. of the cases notified. Several important improvements were made to the hospital during the year, as advised in the medical officer of health's last report, and the staff of trained nurses has been permanently increased.

General Sanitation.

A large amount of the sanitary inspector's time is occupied in taking precautions against the spread of infectious disease, as all notified cases are visited, and, if necessary, information is also given to the school authorities. He also supervises the removal of cases to hospital, and sees that, as far as possible, fumigation and disinfection are carried out. Attention is again called in the report to the condition of the Pit Heap. The cellar dwellings in Walter Street were inspected, and found to be in a filthy condition. They are stated to be most undesirable dwellings, but as structurally they are in accordance with the Public Health Acts, no action can be taken. The houses at East Ferry have been further improved. Many of the back lanes in the town are very defective, and even in fine weather are very difficult to keep clean, owing to a great extent to want of proper repair. The removal of refuse is stated to be in some instances not so expeditiously performed as it might be.

During the year 76 ashpit-privies were abolished, and 94 ashclosets substituted. The question of erecting a public slaughter-house was considered during the year, but owing to the cost and other difficulties, the matter was dropped. Two convictions

were obtained for the exposure of infected persons, and there were three prosecutions for the sale of unsound food, two of which were successful. 23 persons were also successfully prosecuted for nuisances in connection with ashclosets.

33 samples were analysed under the Food and Drugs Acts, one of them being adulterated. There were several successful prosecutions for breaches of the lodging-house bye-laws.

Sanitary Requirements.

1. The conditions on the Pit Heap appear to require attention.

2. The defective back lanes should be put into proper repair.

The report does not state if the district now possesses a steam disinfecting apparatus, but if not the provision of one is very desirable.

STOCKTON.*

THOMAS HORNE, M.D., Medical Officer of Health.

Area in Acres, 2,848. Estimated Population, 1896, 54,530.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

30·4 16·0 2·49 163.

Phthisis death-rate, 1·02. Respiratory diseases death-rate, 2·71.

The general, zymotic, and infant mortality death-rates are all very much lower than in 1895, and the general death-rate is very satisfactory.

* The report of the medical officer of health not having been received by the end of March, the vital statistics now given have been obtained from returns made to the county medical officer by the district registrar, the estimated population on which they are calculated being determined on the rate of increase in the population between the census of 1881-91.

The summary of Dr. Horne's report will be subsequently published as an addendum.

WEST HARTLEPOOL.

S. GOURLEY, M.D., Medical Officer of Health.

Area in Acres, 2,454.		Estimated Population, 1896, 51,920.	
Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
32'3	14'5	1'5	126
Phthisis death-rate, 1'2.		Respiratory diseases death-rate, 2'8.	

The general death-rate is very low for the size of the town, and the zymotic death-rate and infant mortality-rate compare with the similar rates for previous years very favourably. Referring to the infant mortality Dr. Gourley says:—"By a remarkable coincidence the majority of cases of bad feeding, and the worst cases always, occur in children who are insured. I do not refer for one moment to Friendly Societies' Burial Club, but to those Insurance Societies which pay more than the amount of the funeral fees and expenses."

Infectious Diseases.

There were 304 cases notified, a number slightly in excess of the previous year. Scarlet fever was the most prevalent disease (210 cases, 15 deaths), and the case mortality was somewhat high. None of the other notifiable diseases were at all prevalent, the number of cases of enteric fever being 42, and of diphtheria and croup 14. The great majority of the zymotic deaths were from the non-notifiable diseases—measles (25 deaths), whooping cough (11 deaths) and diarrhoea (22 deaths). The number of cases removed to hospital was 27, and included the two cases of small-pox which were reported in the town during the year.

General Sanitation.

Of 14 well waters analysed 11 were found to be polluted. These were closed and the town water laid on. The public abattoirs have worked very satisfactorily, and so far as is known all the beasts killed in the town are now slaughtered and dressed in them. Of the beasts slaughtered there, 21 were seized and condemned on account of extensive tuberculosis. The question of compensation to the butchers in such cases has not yet been settled. The Borough Surveyor has been empowered to report on a new system of sewerage for the town, "which is clearly needed throughout the whole borough on account of its rapid growth. Seaton especially needs a new system of sewage." Of the 51 samples of foods and drugs taken for analysis 7 were found to be adulterated. One of the offenders was fined, and the others were cautioned by the Health Committee. Dr. Gourley says that in every case of clear adulteration prosecutions should follow, both for the protection of the public and honest traders. A number of houses near Stranton Mill and in Melbourne and Ann Streets were closed on account of their insanitary condition, and some of them have since been rebuilt. The public laundries are stated to be all in a satisfactory state, but constant supervision of the common lodging-house is necessary to keep them at all sanitary, and the Health Committee are strongly urged to grant no new licenses unless the premises are built for the particular purpose. The milk shops have increased by 11 during the year,

and they have all, as well as the cowsheds, been inspected. The number of prosecutions for breaches of the sanitary acts was 13, and they were all successful.

Sanitary Requirements.

The recommendations of the medical officer of health have reference to the more stringent enforcement of the adulteration acts, the licensing of common lodging houses, and the preservation of open spaces.

URBAN DISTRICTS.

BARNARD CASTLE.

ALFRED H. SEVIER, M.B., Medical Officer of Health.

Area in Acres, 533.		Estimated Population, 1896, 4,341.	
Birth-rate.	Death-rate.	Zymotic death-rate,	Infant Mortality-rate.
26·7	16·3	0·69	94
Phthisis death-rate, 2·07.		Respiratory diseases death-rate, 2·53.	

The above statistics are satisfactory, but the phthisis death-rate is rather high. The above figures exclude the deaths of 8 persons stated not to belong to the town, and include 3 deaths occurring outside the town which belonged thereto.

Infectious Diseases.

The notified cases were 11 of scarlet fever, 8 of erysipelas, and 2 of enteric fever, but there was not a single death from these or any of the other notifiable diseases. Whooping cough caused one death, and the disease was prevalent in the early part of the year. Measles broke out later on, and it was necessary to close the infant schools for a time. The

report points out the difficulty there is in getting parents to recognize the dangers and infectivity of measles and to take the necessary precautions as to isolation, calling in medical aid, &c. The notification of the first case in a house is advised. Measles and diarrhœa each caused 1 death. Dr. Sevier points out the danger to the town of an introduction of small-pox owing to the growing neglect of vaccination.

General Sanitation.

The water supply is stated to be now abundant and good, the reservoir having been cleaned out and other repairs effected. The sewage disposal works are now completed, and appear to work satisfactorily. New drains have been laid down in Bridgegate and in the courts and yards there. "The usual supervision of common lodging-houses, slaughter-houses, &c., has taken place," but no action has been called for with respect to offensive trades, factories, and workshops.

Sanitary Requirements.

It is very desirable that the recommendation of the medical officer of health, that all plans of the sanitary arrangements of new buildings should be submitted to him, and that the supervision of the same should be entrusted to him and to the surveyor, should be adopted.

BENFIELDSIDE.

GEORGE RENTON, M.D., Medical Officer of Health.

Area in Acres, 1,525. Estimated Population, 1896, 7000.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

31·1

18·9

1·6

180

Phthisis death-rate, 0·7.

Respiratory diseases death-rate, 2·2.

There is a considerable increase in the general death-rate as compared with 1895, and the infant mortality-rate was again very high. The increased death-rate was the result of the large number of deaths among the very old and very young, the mortality from preventible diseases being but small.

Infectious Diseases.

There was a large decrease in the number of cases notified, only 40 as against 85 in the previous year. The 14 cases of scarlet fever were scattered over different parts of the town, and Dr. Renton thinks that the infection came from some of the schools, where the infection may lie dormant till some disturbing influence arises. All the cases of enteric fever occurred during the first five months of the year, but the report points out that the comparative freedom of the district from this disease was largely the result of the favourable climatic conditions, and that the District Council must continue vigilant in detecting and removing insanitary conditions. There were 6 cases of diphtheria, and it is pointed out that for some years cases have occurred in the Benfieldside Road, though their cause has not yet been discovered. Measles and whooping cough were prevalent during the greater part of the year, and the latter caused 5 deaths. The death from puerperal fever probably resulted from the patient being visited by a woman who was nursing a case of erysipelas.

General Sanitation.

The general water supply has continued good, .

but the water of two wells which was analysed was found to be polluted, and one of the wells was permanently closed. The other is an unsafe water, and as it is used both for drinking and dairy purposes it should also be closed. The report states that many of the older houses are of very poor construction, and many of them, notably those in Silver Street, are unfit for habitation. The importance of cementing the back yards of houses and of rendering the sites of houses impervious to ground air and moisture is pointed out. The house drainage and sewerage is stated to be generally satisfactory, but in the older class of houses the drainage is defective, and in some instances the house drains are defectively trapped. The effluent from the sewage disposal works is reported to be always clear and sweet, although the filtering beds do not appear capable of dealing with the whole of the sewage. There is still great need for the improvement of the means of excrement disposal, as in many parts of the town the ashpit-privies are very objectionable and a constant source of nuisance. With regard to the cleansing of the ashpits, &c., Dr. Renton again draws attention to the desirability of the District Council undertaking the work, and says :—" It would be a huge stride in the right "sanitary direction." The cowsheds, with one exception which was closed, have been kept in good condition, and the same remark applies to the dairies, milk shops, and slaughter-houses. The sanitary improvements effected include the cementing of numerous

house yards, the reconstruction and improvement of a number of privies and ashpits, the removal of sanitary defects from houses, &c. The attention of the public is drawn to the fact that a new steam disinfecting apparatus has been erected at the Leadgate hospital, and that all infected articles can be disinfected at a nominal cost.

Sanitary Requirements.

1. The District Council should take systematic action for the improvement of the sanitary condition of the older dwellings in the district and for the removal of the defects of drainage and excrement disposal mentioned in the report.

2. The systematic scavenging of the district by the local authority is also very desirable.

BISHOP AUCKLAND.

T. A. McCULLAGH, M.R.C.S., Medical Officer of Health.

Area in Acres, 692.		Estimated Population, 1896, 12,197.	
Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
31·0	16·7*	1·2	148
Phthisis death-rate, 1·0.		Respiratory diseases death-rate, 3·0.	

All the above mortality statistics compare favourably with those of previous years, and, provided the high estimate of the population is correct, they are satisfactory.

Infectious Diseases.

The Notification Act has not been adopted in this district, and no estimate of the prevalence of these

Excluding 26 deaths in district not belonging thereto, but not including 5 deaths belonging to the district occurring in public institutions, &c., outside it. The inclusion of these 5 deaths would raise death-rate to 17·1 per 1,000.

diseases can be given. Measles was the most fatal zymotic, causing 6 deaths, one of which occurred in the Workhouse. Enteric fever again caused 4 deaths, but the degree of prevalence of the disease is not stated. As to its cause Dr. McCullagh says :—" I am " more forcibly than ever drawn to the conclusion " that the great majority (of typhoid cases) are due to " infection from undisinfected or partially disinfected " excreta of patients thrown into ashpits or privies, " and infecting those who live in the immediate " neighbourhood." The report states that the isolation hospital has always proved large enough for any demands made upon it, and that arrangements have been made by which the hospital will be under the supervision of the medical officer of health, and the patients will be attended by a trained nurse. Only 51 patients have been treated in the hospital during 12 years.

General Sanitation.

A Local Government Board enquiry was held in March into an application by the District Council for permission to borrow a large sum of money for the improvement of the water supply taken from the river. The application was opposed by the clerk and medical officer of the County Council, who officially represented that authority, and the application was refused by the Board. Dr. McCullagh is of opinion that by efficient sand filtration the water from the river can be made perfectly pure and safe for drinking purposes. The sewers of the town have been improved by the con-

struction of several manholes and the provision of more ventilating pipes. The sewage disposal scheme which had been approved by the Local Government Board will have to be modified, as serious pit-falls have occurred on the land and along the line of the proposed main sewer. 10 houses in High Bridge Street and 2 in Powell's Yard have been closed by order of the magistrates on account of their insanitary condition.

Sanitary Requirements.

1. The adoption of the Infectious Diseases Notification Act.
2. A pure and safe water supply for the town.

BLAYDON.

PHILIP BROWN, M.D., Medical Officer of Health.

Area in Acres, 9,349.		Estimated Population, 1896, 17,500.	
Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
34'5	13'5	2'5	137
Phthisis death-rate, 0'51.		Respiratory diseases death-rate, 2'74.	

The general death-rate is very low, and all the above mortality statistics compare very favourably with those of 1895. The estimated population is, however, given as 1,500 higher than in the previous twelve months, although the increase of births over deaths is under 400.

Infectious Diseases.

There was a very great increase in the number of cases notified—397 as against 191 in 1895. This was largely the result of the increased prevalence of scarlet fever (240 cases), which was of a very mild

type, and only caused 2 deaths. There were 90 cases of enteric fever (11 deaths) as against 60 cases in the previous year, and in connection with this disease the medical officer of health calls attention to the insanitary state of the Haughs and to the dangerous quality of the water supplied to the eastern portion of Blaydon. Only 1 of the 32 cases of diphtheria ended fatally. With regard to the precautionary measures taken respecting infectious diseases, the report refers to "the shameless laxity of parents and others" as regards scarlet fever. There were 22 deaths from diarrhœa, most of them occurring during the second quarter of the year, and 5 deaths from whooping cough. 31 cases were isolated in the hospital, which is stated to have been of great service. All infected houses, clothing, and bedding are stated to be disinfected.

General Sanitation.

The main sewerage and sewage disposal works at Spen have been completed, and at Ramsey's Buildings, Spen, and at Blackhall Mill the main sewers have been relaid. Improvements at Hookergate and Blaydon are also reported, and at Winlaton and Blaydon the ventilation of the sewers has been improved. 22 insanitary houses are stated to have been made habitable, and one was closed. With regard to excrement disposal 78 ash-pits have been repaired, 23 new ones built, 10 middens removed, 6 water-closets substituted for privies, and 8 galvanized receptacles provided, which are emptied twice weekly. The scavenging is satisfactorily done by contract. The

cowsheds and slaughter-houses are stated to have received attention, and 7 have been repaired and 6 registered: the use of one was discontinued. 24 cases of overcrowding, which, as a rule, resulted from the sub-letting of small houses, were dealt with.

Sanitary Requirements.

1. A better and purer water supply for the eastern portion of Blaydon.

2. The removal of the insanitary conditions at Blaydon Haughs.

BRANDON AND BYSHOTTLES.

HENRY SMITH, M.B., Medical Officer of Health.

Area in Acres, 6,683. Estimated Population, 1896, 15,812.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

33'3

16'1

2'0

193

Phthisis death-rate, 0'50.

Respiratory diseases death-rate, 4'8.

The infant mortality-rate is again high, but the other statistics are satisfactory, there having been a marked diminution in the general and zymotic death-rates as compared with the previous year. The phthisis death-rate was again remarkably low.

Infectious Diseases.

There was a great reduction in the number of infectious cases notified—only 142 as compared with 318, 376, and 323 cases in the three previous years. Only 24 cases were notified in the second half of 1896. Scarlet fever was the most prevalent disease (98 cases), and caused 4 deaths. Of the 6 cases of membranous croup notified 5 were fatal, and 2 of the 5 cases of

diphtheria also died. Of the 16 cases of enteric fever 4 terminated fatally. The report does not state whether the etiology of any of the cases of diphtheria and enteric fever was ascertained. Thirty scarlet fever patients were treated in the isolation hospital, though there is still some difficulty in persuading parents to send their patients to that institution. The hospital has not been enlarged as recommended by the medical officer of health in his previous report, but during the past year it is stated to have met the requirements of the district. Infected houses and bedding have been disinfected as in previous years.

General Sanitation.

The water supply to Brandon Village failed during the month of May, and for more than two months the village was without a supply. The rains at the end of July replenished the supply, but two analyses of the water made at the end of that month showed it to be much contaminated, and the county analyst reported it to be unfit for drinking purposes. Dr. Smith recommended that the village should be supplied with Waskerley water, and the District Council asked for tenders for the work, but owing to the expense and to the fact that at the end of the year there was a plentiful supply from the old source, it was decided that the matter should stand over till the spring. The water supply to a farm was also analysed and found to be polluted. The owner has since sunk a new well, but the water has not yet been analysed. The scavenging of the district was better performed

than in previous years, and the ashpits were disinfected after being emptied. The cowsheds and slaughter-houses were inspected, and generally found to be in good condition.

As a result of a complaint some improvement was effected in the ventilation of the sewer at Esh New Winning, which appears to have remedied the nuisance. The road to the isolation hospital, which was formerly in a very bad condition, has been properly made, and the hospital is now much more accessible.

Sanitary Requirements.

1. A pure and constant water supply appears to be much needed at Brandon Village.
2. The need for the enlargement of the isolation hospital must not be overlooked.

CONSETT.

GEO. RENTON, M.D., Medical Officer of Health.

Area in Acres, 993. Estimated Population, 1896, 8,860.

Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
32·3	19·5	1·9	184
Phthisis death-rate, 1·69.		Respiratory Diseases death-rate, 5·3.	

The mortality among the young and old, and from acute lung diseases was high, and more than accounts for the increase of the death-rate as compared with the previous year. It is pointed out that many of the infant deaths need not have occurred, and that at least 18 of them were due to improper feeding.

Infectious Diseases.

There were only 63 cases notified as compared with 239 in 1895. None of the 24 cases of scarlet

fever proved fatal, and the cases were scattered over the town. Dr. Renton thinks that the schools were instrumental in spreading the disease. There were only 18 cases of enteric fever as compared with 143 cases in the previous years. Most of the cases "were in the worst parts of the district where there are large open middens and badly constructed channels close to the foundations of the houses." The report points out that cold wet weather, such as obtained last autumn is unfavourable for the development of enteric fever, and supports the contention that a microbe cannot rise from a wet surface. Dr. Renton issues the warning that unless the sanitary defects which undoubtedly exist in many of the streets are remedied there will be a repetition of the epidemic of enteric fever of 1895, whenever a hot and dry summer and autumn occur. Measles and whooping cough were both prevalent and fatal during the year, causing respectively 7 and 4 deaths. Not a single case of infectious disease was removed to the isolation hospital during the year.

General Sanitation.

The report points out that although a large number of roomy and well constructed houses are being erected, in many of them the sites are not rendered impervious over their whole area, and therefore ground air and moisture can gain access. Also an objection is raised that the yards of such houses are often not paved over their whole extent, with the result that water stands in them and dirt accumulates.

“The older houses are of miserable construction and are quite out of date.” The house drains are with few exceptions trapped, but “the drainage of some of the streets is decidedly insanitary, consisting of open brick channels, often defective, running at the backs of the dwellings, and emptying themselves into large gullies placed close to some habitation.” In the older parts of the town the objectionable midden-privy exists, and though there are also many water closets, “in many instances they are filthy, very much neglected, and are very often rendered useless by the wanton destruction of the tenants.” As the report suggests, it is advisable that some of the offenders in this respect should be prosecuted. The removal of refuse and the scavenging of the private property in the town is still unsatisfactory, and the District Council is again urged to undertake the duties of scavenging. The cowsheds, dairies, and slaughter-houses have been kept under supervision, and the former are registered. Several insanitary dwellings are reported to have been dealt with during the year, and 220 written notices were served for the abatement of nuisances.

Sanitary Requirements.

1. The sites of all new houses should be rendered impervious to the passage of ground air and moisture in to the houses.
2. The defects of privy accommodation and drainage mentioned in the report should receive the attention of the District Council who should themselves undertake the scavenging of the town.

3. The tenants who injure or improperly foul the water closets used in common should be prosecuted under section 21 of the Public Health Acts Amendment Act, 1890.

FELLING.

THOMAS M. CLAYTON, M.B., Medical Officer of Health.

Area in Acres, 2,684. Estimated Population, 1896, 20,000.

Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
38·9	18·6	2·2	141
Phthisis death-rate, 1·9.		Respiratory diseases death-rate, 3·7.	

The general death-rate and infant mortality-rate show a very gratifying decrease as compared with previous years. Dr. Clayton has only held office since August last, and he has therefore had considerable difficulty in preparing a complete report.

Infectious Diseases.

The number of cases notified was 180, and 130 of these were scarlet fever. Some of the cases were of a severe type, and there were 3 deaths. Of the 7 cases of membranous croup notified no fewer than 6 died. One mild case of typhus fever was reported from the Heworth district, and there were 9 cases of enteric fever, but the etiology of the cases is not discussed. Measles was rather prevalent throughout the year, and caused 19 deaths. During its epidemic prevalence the attendance at the schools was very much reduced, and the Church schools were temporarily closed. Dr. Clayton thinks that school attendance has a great deal to do with the spread of the disease. The great need of an isolation hospital

is pointed out. "In our present condition we have "not the slightest chance of complete isolation of "sporadic cases."

General Sanitation.

Improvements in the sewerage of Wardley have been effected, and the Felling main sewer has been extensively repaired. At Wardley four streets which were in an insanitary condition have been almost repaved. At Windy Nook considerable sanitary improvements are reported to have been effected, the village and especially the back streets having been largely repaved. The dairies, cowsheds, and slaughter-houses are stated to have been kept well under observation, and to be in a fairly good sanitary condition. The water supply is stated to have been good.

Sanitary Requirements.

An isolation hospital, properly equipped, should be erected without any further delay.

HEBBURN.

GEORGE N. WILSON, M.B., Medical Officer of Health.

Area in Acres, 1,180.		Estimated Population, 1896, 19,278.	
Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
35·1	14·6	1·9	123
Phthisis death-rate, 1·63.		Respiratory diseases death-rate, 2·59.	

The population is estimated at over 1,000 more than in the previous year, and is determined by multiplying the number of inhabited houses by 6. This appears to be a rather large number of persons per house.

The above mortality statistics compare favourably with those of the previous year ; the general death-rate being very low, and varying from 12·0 per 1,000 during the first quarter to 17·0 during the last quarter of the year. The reduction in the infant mortality is stated to have resulted from better climatic conditions, more general prosperity, and probably also from an increasing appreciation of the advantages of sanitation generally.

Infectious Diseases.

The cases notified numbered 100, or 65 less than in the previous year. Scarlet fever was the most prevalent disease, though there were only 61 cases as against 111 in 1895. In proportion to the population it was most prevalent at the Colliery. There were 9 cases of enteric fever, and 5 of these were at the Colliery where the out-offices consist mostly of ashpit-privies close to the houses. One of the 5 cases of diphtheria proved fatal. The probable causes of the diphtheria and enteric fever cases are not stated.

Measles was epidemic in the district from the end of October and caused 17 deaths, 13 of which were at the Quay. It was found necessary to close the schools at the Quay and the Colliery, and this action had good results at the Quay, but at the Colliery the attendance at the schools on re-opening them was so small that it was necessary to close them for another month, by which time the epidemic had almost disappeared. Dr. Wilson points out that the great difficulty in combating the disease is the indifference

and fatalism of the parents regarding it. He thinks that notification, at least of the first case in every house, should be compulsory, and that there should be isolation accommodation for measles as for other fevers. There was one case of smallpox which was removed to Jarrow fever hospital, owing to the want of isolation for the case at Hebburn. In the Hebburn isolation hospital 17 cases were treated, and all of them recovered. Plans for a new hospital of 4 wards (10 beds) with administrative block, discharging block, and laundry have been passed by the Council, and have been sent to the Local Government Board for their approval. The present hospital is to form one ward block, and an additional acre of ground has been purchased. All the cases of notified infectious diseases have been visited both by the medical officer of health and inspector.

General Sanitation.

The work of replacing insanitary middens by small ashclosets progressed slowly during the year, and 16 middens were abolished and 58 ashclosets substituted. At the Colliery, however, only 2 middens have been abolished in two years, and out of 574 ashpit privies, 220 might be condemned as nuisances, as they are within 6 feet of the dwellings, the average distance of the ashpits from the pantries being only 4 feet 2 inches. It is not to be wondered at that the general death-rate is higher in this district than in the other parts of the town, and that the preventable diseases are more prevalent there.

The sanitary inspector reports that 350 notices were served for the abatement of nuisances, and in 10 cases legal proceedings were taken. Since May the scavenging and removal of refuse in the district have been performed by the employés of the District Council with satisfactory results. The cowsheds, dairies and milkshops, the slaughter-houses, and bakehouses have all been kept under observation by the inspector, and were generally kept in good condition.

10 samples were taken by the sanitary inspector for analysis under the Food and Drugs Act, and were certified by the county analyst to be free from adulteration. The houses of several streets at the Colliery have been spouted.

Sanitary Requirements.

The District Council should exercise their powers under the Public Health Act, 1875, for the removal of the nuisances arising from the many insanitary middens at the Colliery

HETTON-LE-HOLE.

J. ADAMSON, M.D., Medical Officer of Health.

Area in Acres, 1,618. Estimated Population, 1896, 14,250.

Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
38·8	18·1	5·7	175
Phthisis death-rate, 0·77.		Respiratory diseases death-rate, 1·8.	

The birth-rate and general death-rate show a decline compared with the previous year, but the zymotic death-rate is very high, owing to the very large number of deaths from diarrhœa, measles, and whooping cough. The high infant mortality-rate is

also largely the result of the prevalence of these diseases.

Infectious Diseases.

There were 74 cases notified, including 34 of erysipelas and 26 of scarlet fever. There were only 6 cases of enteric fever, as compared with 43 in 1895. Three of the 6 cases ended fatally, but in no instance was the cause of the disease discovered. 20 of the erysipelas cases occurred in the Easington Lane district, but no light could be thrown on their etiology. Measles and whooping cough were both very prevalent, causing respectively 26 and 21 deaths. Measles was so seriously epidemic at Eppleton during May that the schools were ordered to be closed for a month. The mortality from diarrhœa was also very great (30 deaths), though this fact is not discussed in the report. Two cases of enteric fever were removed to the isolation hospital.

Pails containing a strong disinfectant are supplied by the District Council to all houses where cases of enteric fever exist, for the reception of the discharges of the patients. These pails are periodically collected by the servants of the Council, and their contents disposed of. As a means of limiting the spread of enteric fever in a district, this practice cannot be too highly commended.

General Sanitation.

The general sanitary condition of the district is stated to have been much improved, and the Brickgarth to be in a thoroughly sanitary condition, every

house now being provided with proper privy accommodation. The report points out that the ashclosets are often improperly used, and that slops are at times thrown into them. It is suggested that bills be issued prohibiting the practice, and if this fails, the tenants should be prosecuted. The ventilation of the houses is often defective, owing to the windows not opening, as a result of the tenants painting them up and stopping the entrance of fresh air, and Dr. Adamson points out that the tenants are often as much to blame for sanitary defects as the owners.

The food supply of the district has received attention during the year, but no seizure of bad food was made, and no legal proceedings were necessary.

The two lodging-houses have been kept under observation, and there has been a marked improvement in their condition and management.

Six notices were served under the Housing of the Working Classes Act, but at the end of the year they had not expired, and 176 formal notices were also served in respect of 280 properties, and 143 nuisances were abated.

Sanitary Requirements.

Where the tenants improperly use or foul the ashclosets provided for their use, they should be prosecuted under Sect. 21 of the Public Health Acts Amendment Act.

HOUGHTON-LE-SPRING.

D. S. PARK, F.R.C.S., Medical Officer of Health.

Area in Acres, 1,551. Estimated Population, 1896, 6,720.

Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
45'2	20'1	2'8	118

Phthisis death-rate, 1'3.	Respiratory diseases death-rate, 2'3.
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The birth-rate was very high, but all the chief mortality statistics compare very favourably with those of the previous year, the infant mortality-rate being remarkably low. The general death-rate was highest in the third and lowest in the first quarter of the year.

Infectious Diseases.

There were only 68 cases notified, or 26 fewer than in the previous year. Although 35 cases were reported, scarlet fever for the second year in succession did not cause a single death, and not a single case was reported from the populous districts of Chilton and Colliery Row. Owing to the mild type of the disease there was great difficulty in getting the parents to observe the necessary precautions against its spread. There was a decrease in the prevalence of enteric fever, but there were 19 cases notified with 5 deaths, which, as Dr. Park remarks, is not satisfactory. Cases occurred in nearly every month of the year, and the fouling of the back streets and yards during the emptying and cleansing of the ashpit-privies is considered to be one of the causes of its marked prevalence. No connection between the milk and water supplies and the cases could be detected, but

one fatal case appears to have resulted from the eating of oysters. Measles was very prevalent and fatal during the second half of the year (10 deaths), and in consequence the Wesleyan and Church schools had to be closed. Whooping cough caused 4 deaths, but there was not a single death from diarrhœa. The precautionary methods against infection adopted in previous years were again followed, but the district is still without any isolation hospital accommodation.

General Sanitation.

The milk and meat supplies have been up to the average of previous years, but two convictions were obtained for the sale of meat from tuberculous animals, though in one instance the butcher appears to have been hardly dealt with, and there is much force in Dr. Park's remarks that "it is much to be regretted that some distinction should not be drawn between local tuberculosis and general tuberculosis involving the flesh of the animal." The consumption of water averaged 12 gallons per day for each inhabitant, and the supply only just meets the requirements. No analysis of the water was made during the year, an undesirable omission seeing that the water is liable to intermittent pollution. In the report is given a list of some of the sanitary improvements effected, and they include the resewering of Edwin Street, the reconstruction of the conveniences in several streets, the making of footpaths, curbing, channelling, &c. The report points out the advisability of bye-laws being made which would apply to houses occupied by two or

more families, as they cannot be dealt with under the existing bye-laws. The report again refers to the need of paving the back streets and the proper ventilation of the sewers, which, owing to the death of the late surveyor, have not been dealt with. The dangers of the old privy-midden system are again pointed out.

Sanitary Requirements.

The following recommendations are made in the report :—

1. The provision of an isolation hospital.
2. The making and paving of the back streets and yards.
3. The adoption of improved receptacles in place of the old privy-middens, which would also avoid the necessity of depositing the night-soil on the ground during the process of removal.
4. The better ventilation of the sewers.
5. The adoption of bye-laws for the control of tenemented property.

The report is **not** printed.

LEADGATE.

GEORGE RENTON, M.D., Medical Officer of Health.

Area in Acres, 1,838.		Estimated Population, 1896, 4,660.	
Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
36·2	21·4	2·5	213
Phthisis death-rate, 1·7.		Respiratory diseases death-rate, 5·1.	

The general death-rate was the highest recorded for many years, and the infant mortality-rate was also excessive. The high death-rate does not appear to have been due to any special insanitary

conditions, but the result of a large proportion of very old people dying, and the high mortality from measles, whooping cough, and respiratory diseases.

Infectious Diseases.

Only 25 cases were notified as compared with 268 in 1895, an extraordinary reduction. None of the 16 cases of scarlet fever ended fatally, and it is satisfactory to note that 10 of the cases were treated in the isolation hospital. There were only 2 cases of enteric fever reported as against 184 in the previous year. Measles and whooping cough were both prevalent, causing respectively 9 and 2 deaths. The village school at Iveston had to be closed owing to the prevalence of measles there. Dr. Renton points out the probable causes of the continued high mortality from chest affections, namely, the altitude of the district, the cold clayey nature of the subsoil, the imperfect construction of many of the dwellings, the insufficient clothing and imperfect boots of the children attending school, who often have to sit for hours with damp feet, the carelessness of the parents, and perhaps in some cases the infectiousness of the cases. He also points out that many of the lives of the children dying under 1 year of age were needlessly sacrificed.

General Sanitation.

The necessity of making the whole of the sites of new houses impervious to ground air and moisture is again pointed out. The older houses in the district are of poor construction, as they "have but one living-room, from which a ladder leads up to an unceiled

"and badly lighted attic, euphemistically called a bed-room." Some of these of late years have, however, been enlarged and improved by the owners. A great improvement is stated to have been made by the Consett Iron Co. in the drainage and sewerage of their property. "There is pressing need for reform in the disposal of the sewage," as it at present discharges into and grossly pollutes watercourses. The sewage which enters the district from Consett is stated to no longer cause any pollution. Many of the ashpit-privies are too large and otherwise objectionable. The District Council have not yet taken the scavenging into their own hands, and in the private property "the work devolves upon the tenants, with anything but satisfactory results." Considerable improvement in the condition of the cowsheds, dairies, and milk shops is stated to have been effected.

Sanitary Requirements.

1. The cementing of the sites of all new buildings.
2. The abolition of the insanitary midden-privies and the undertaking of the scavenging of the district by the Local Authority, at any rate as regards the private property.
3. The laying down of works for the proper sewage disposal of the district.

RYTON.

PHILIP BROWN, M.D., Medical Officer of Health.

Area in Acres, 5,150.		Estimated Population, 1896, 6,450.	
Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
36·9	15·6	2·0	147
Phthisis death-rate, 1·1.		Respiratory diseases death-rate, 3·2.	

With the exception of the zymotic death-rate all the above rates are considerably higher than in 1895, but are nevertheless fairly satisfactory.

Infectious Diseases.

Owing to the continued prevalence of scarlet fever in a mild form there was a great increase in the number of notifications. Of the 105 cases notified 89 were of scarlet fever, but not a single death resulted. In connection with the 6 diphtheria cases, of which 3 died, there are stated to have been no specially insanitary conditions, "unless it was some slight foulness of the drains, which was at once rectified." Two of the three notified cases of enteric fever died, but the origin of the cases is not stated. Referring to the prevalence of scarlet fever, Dr. Brown points out that it is the result of the shameless indifference of the mothers to the dangers attaching to the disease, and he says that the patients are frequently allowed to play with other children long before desquamation is complete. 7 infected houses were disinfected during the year, but the district is still without an isolation hospital.

General Sanitation.

Water of good quality at the rate of 11 gallons per head per day has been supplied to the district. The sewerage of Crawcrook has been improved and a

new sewer laid from Hedgefield to Runhead. The ventilation of the sewers has been improved, and they are stated to have been systematically flushed. The sewage disposal works for Stargate have not as yet been provided, but it is anticipated that a start will be made in the spring. Dr. Brown again refers to the necessity of the District Council insisting that the private streets should be properly made, but the report does not state whether new sanitary and building bye-laws, the need for which was strongly urged in last year's report, have been adopted.

Sanitary Requirements.

1. The provision of isolation hospital accommodation.
2. New building and sanitary bye-laws.
3. The District Council should put into active force its powers with respect to the making of private streets.

SEAHAM HARBOUR URBAN DISTRICT.

L. GERALD DILLON, M.B., Medical Officer of Health.

Area in Acres, 1,089.		Estimated Population, 1896, 9,830.	
Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
43'5	21'8	1'4	212
Phthisis death-rate, 2'1.		Respiratory diseases death-rate, 4'6.	

The zymotic-rate is the lowest for several years, and is satisfactory, but the general death-rate is again high, and the infantile mortality excessive, the cause of which is stated to be injudicious feeding and hereditary disease.

Infectious Diseases.

Exactly the same number of cases were notified last year as in 1895 (114), and the most prevalent disease was scarlet fever with 86 cases, though it was of a mild type, and only caused 2 deaths. Of the 14 cases of enteric fever 5 ended fatally, a rather high mortality. The cases were of a sporadic nature, and no common cause could be discovered. There were no cases of diphtheria, typhus, or puerperal fevers notified.

General Sanitation.

The water supply is stated to have been of a satisfactory character, and a copy of an analysis that was made is included in the report, and shows that chemically it was of good quality. The scavenging is stated to have been well performed, but Dr. Dillon hopes that a proper hatch for cleansing may be more generally adopted. The sanitary condition of several houses is stated to have been much improved, and some improvements have been made to the main sewers, which have been regularly flushed. The dairies and common lodging-houses are reported to have been regularly inspected and found in good condition. New sanitary bye-laws are in course of preparation, and the hope is expressed that they will soon be adopted.

Sanitary Requirements.

None specially mentioned. Although the district possesses a suitable isolation hospital not a single case of infectious disease appears to have been

removed to it, though probably the spread of scarlet fever would have been greatly reduced had suitable cases been isolated in the hospital.

SHILDON AND EAST THICKLEY.

S. FIELDEN, M.D., Medical Officer of Health.

Area in Acres, 1,066. Estimated Population, 1896, 10,082.

Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
32·3	15·8	1·88	132
Phthisis death-rate, 0·4.		Respiratory diseases death-rate, 2·6.	

The above statistics are very satisfactory, and compare favourably with those of the previous year. The decline in the infant mortality-rate was very marked.

Infectious Diseases.

There was a slight increase in the number of cases notified, owing to the more marked prevalence of scarlet fever, of which disease 74 cases were reported, as against 14 in 1895. There were only 17 cases of enteric fever notified, or less than half the number of the previous year, and the marked decrease in its prevalence and mortality in the district during the last few years is attributed to the use of the air-tight pails for the excreta of the patients. Measles and whooping cough were both prevalent, and altogether were responsible for 10 deaths, while there were 5 deaths from diarrhœa. There were no cases of small-pox reported, but referring to this disease, Dr. Fielden says :- "I very much fear the neglect of vaccination "will end some day in the loss of many valuable lives. " . . . I am satisfied that in proportion to the good-

“ness and amount of vaccination, in the same proportion will people enjoy immunity from the disease. . . . I would unhesitatingly recommend everyone to be vaccinated and re-vaccinated every few years.” The town is still without an isolation hospital, but arrangements have been made to combine with the adjoining district of Willington and Auckland (rural) for hospital purposes.

General Sanitation.

The water supply has generally been excellent both as regards quantity and quality, and the results (published in the report) of an analysis of a sample of the water taken by the Medical Officer of Health are satisfactory. The report states that at times the ashpits are not properly scavenged, and the importance of this work being well performed is strongly urged on the District Council, as its neglect in the past has probably resulted in the development of enteric fever. With regard to new buildings, the effectual drainage of the subsoil is insisted upon, as is also the provision of damp courses in the walls. Many of the streets and footpaths are stated to be in a deplorable condition, and to require immediate attention. The insanitary conditions at Garbutt's Buildings have at last been removed. A large number of notices have been served for the abatement of nuisances, and most of them have received attention.

Sanitary Requirements.

1. The District Council should see that the scavenging is at all times properly performed.

2. The foundations of all new dwellings should be made impervious to the passage of ground air or moisture, and the walls should be provided with damp-proof courses.

3. The streets and footpaths, which are in bad condition, should receive attention.

SOUTHWICK.

JAMES STOBO, L.R.C.P., Medical Officer of Health.

Area in Acres, 845. Estimated Population, 1896, 11,550.

Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
38·7	19·2	2·42	192

Phthisis death-rate, 2·0. Respiratory Diseases death-rate, 3·1.

The general death-rate though slightly higher than in 1895 is considerably below the average of previous years. The death-rate was lowest in the first and fourth quarters (17·3), and highest in the second quarter (21·8). The infant mortality rate was again very high and varied from 117 per 1,000 births in the first quarter to 309 in the third quarter.

Infectious Diseases.

The Infectious Diseases (Notification) Act was adopted during the year, and came into force on September 1st. From that time to the end of the year there was no marked prevalence of any notifiable disease; in fact, judging by their small mortality, none of these diseases, except scarlet fever, were prevalent during any part of the year, the only deaths being 2 from scarlet fever and 1 from enteric fever, a record which compares most favourably with previous years. Scarlet fever was prevalent during February and March throughout the greater

part of the district. There was a marked decrease in the prevalence of enteric fever, and only 7 cases were known to have occurred—all during the last quarter. The discharges from the patients were collected in pails containing disinfectants supplied by the Health Department, and these were regularly removed. The mortality among the non-notifiable diseases was rather high, measles and whooping cough each causing 9 deaths, and diarrhœa 7 deaths. Diarrhœa like enteric fever was much less prevalent and fatal than in previous years, and Dr. Stobo points out that the improved sanitary condition of the district has much to do with this satisfactory result.

The fever hospital is stated to have proved most useful, and to have been much improved by the alterations effected in it during the summer. Nine cases of scarlet fever and one of enteric fever were removed to it for isolation.

General Sanitation.

During the year the Medical Officer of Health and Inspector have again made a house-to-house inspection of the district, and it is pointed out in the report that this is a very important duty, as it is only by close inspection that many sanitary defects are detected. 425 Notices were served, more than half of which were in respect of nuisances from ashpits and privies, while the others had to do with structural defects of dwellings, yard paving, and house drainage. 213 of the notices were complied with, and a large number of the others are stated to be receiving atten-

tion. No reference is made in the report as to scavenging and the removal of refuse, or to the condition of the dairies, cowsheds, slaughter-houses, and common lodging-houses.

Sanitary Requirements.

None mentioned.

SPENNYMOOR.

ROBERT S. ANDERSON, M.D., Medical Officer of Health.

Area in Acres, 3,385. Estimated Population, 1896, 17,856.

Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
34·7	18·8	2·7	190
Phthisis death-rate, 0·95.		Respiratory diseases death-rate, 4·36.	

The increase in the estimated population as compared with 1895 is very large, but seeing that the estimate is based on the number of inhabited houses, it is probably fairly accurate. The general death-rate was highest in Spennymoor proper, the most densely populated portion of the district, but on the other hand its zymotic-rate was lower than that of either of the other wards, and this satisfactory fact is attributed to its better sanitary condition. There were 100 uncertified deaths, and over 30% of the total deaths were uncertified as a result of practice by unqualified persons without any medical training—a most deplorable state of things. The general death-rate and infant mortality-rate were very much lower than in the previous year.

Infectious Diseases.

The number of cases notified was 205, or 121 less than in the previous year. Scarlet fever was the

most prevalent disease (123 cases), but it was of a very mild type, and did not cause a single death. None of the 27 cases of diphtheria reported proved fatal. There were 19 cases of enteric fever with 3 deaths, most of the cases being reported from the Spennymoor and Ferryhill wards. Measles was fatally epidemic at the beginning of the year, and caused 24 deaths. Diarrhœa was also responsible for 19 deaths. The cause of the enteric fever cases is attributed to excremental nuisances polluting the air and even the food of the people. Moule's pails lined with peat moss are supplied to all houses where cases of enteric fever occur. The district has neither isolation hospital nor disinfecting apparatus, and the need for both is strongly urged upon the District Council.

General Sanitation.

In the Spennymoor district (the old Local Board area) the house accommodation, means of excrement disposal, drainage, and paving of yards are stated to be generally satisfactory. There are still a number of back-to-back houses, but their ventilation has been improved. Considerable improvements in the drainage have also been effected, and the sewers are being ventilated by shafts, and all surface ventilators near houses closed. The sewage disposal works are inadequate to deal with all the sewage, and their enlargement is under consideration. A great sanitary improvement is being effected by the replacement of ashpit-privies situated near dwellings by small ash-closets. At the National School in High Street the

structural arrangement of the privies to the boys' and girls' department is bad, and the urinal appears to be without a water supply.

In the Added Area (formerly part of the Durham, Auckland, and Sedgfield rural districts) the sanitary condition is not satisfactory, and in the past appears to have been much neglected, but the necessary work for its improvement is now gradually being carried out. A number of streets in the Tudhoe Grange section have been made and provided with footpaths, &c., and a number of other streets are mentioned in the report as urgently needing similar improvement, especially in South Terrace and the Ferryhill ward. The drainage of Tudhoe Colliery village was found to be defective, and the work is in hand for putting it into a good condition. Other improvements in drainage and sewerage have been effected, and plans are being prepared for the disposal of the sewage of the Added Area. In Half Moon Lane and Barber's Row there are some houses without a back street, and a number of other serious defects are indicated in the report, and require to be dealt with at once.

The whole of the schools in the added portion of the district were inspected by the medical officer of health, and many of them were in a very unsatisfactory state. At nearly all the schools the conveniences are the ashpit-privies, and though these have been improved recently, in most instances this type of closet accommodation is not sanitary, and

certainly is not a suitable means of excrement disposal for elementary schools. At the National Schools, Mount Pleasant, the ashpit is drained into the sewer, a most objectionable and insanitary arrangement, and one which the District Council should insist on being remedied at once. Nearly the whole district is supplied with water by the Weardale and Shildon Water Co., but a few houses obtain their supply from wells. Analyses was made of the water from 3 of these wells, and the analytical results are included in the report. One of the wells is undoubtedly polluted, and its use for domestic purposes should not be permitted, while the water of another was not free from objection. The common lodging-houses in the district are reported to have been kept in good condition. The scavenging is undertaken by contractors, who perform the work between the hours of 10 p.m. and 8 a.m. The ash-pits are emptied once a month, and the ashclosets twice a week.

Sanitary Requirements.

1. An isolation hospital and disinfecting apparatus.
2. The abolition of the ashpit-privy system as far as possible.
3. The remedying of the sanitary defects mentioned in the report as existing at the elementary schools, particularly those at the National Schools, Mount Pleasant.
4. The removal of the many nuisances to which reference is made in the report, and the closing

of the wells, the water of which is polluted and unfit for drinking purposes.

5. In the interests of health and from every other point of view it is most desirable that action should be taken to prevent medical practice by unqualified persons.

STANHOPE.

JOHN GRAY, M.B., Medical Officer of Health.

Area in Acres, 211.		Estimated Population, 1896, 1,935.	
Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
26·8	11·3*	1·0	57
Phthisis death-rate, 1·5.		Respiratory diseases death-rate, 1·5.	

The vital statistics are very satisfactory, and show a great improvement over those of the previous year.

Infectious Diseases.

The Notification Act has not yet been adopted in the district, and therefore the number of cases of infectious disease cannot be accurately stated. There was one fatal case of enteric fever in November, and there was also one death from measles. Roetheln (German measles) was prevalent during June, but the type of the disease was very mild.

General Sanitation.

The water supply of the district has been good and plentiful. Two systematic house-to-house inspections of the district were made by the sanitary officers, and the general condition of the ash-pits, &c., were

* Excluding the deaths of 2 persons in the Workhouse not belonging to the district.

found to be much better than in former years. A number of notices were served for the abatement of nuisances, and the majority of them received attention. Complaint has arisen as to certain persons allowing the filth from their ashpits to lie in the streets for part of the day to the annoyance and danger of passers by. It is pointed out that the District Council should enforce their bye-laws in the matter, and that the nuisances would not occur if the District Council would undertake the systematic scavenging of the district.

Seven cottages in Back Lane have been provided with spacious back yards, automatic flush water-closets, and other improvements, and in other parts of the town some defects of drainage and excrement disposal have been rectified.

Sanitary Requirements.

The following are mentioned :—

1. The adoption of the Infectious Diseases Notification Act.
2. Means of isolation of infectious cases and a disinfecting apparatus.
3. New bye-laws.
4. Registration and regulation of dairies and cowsheds.

In addition, the District Council should at once take steps to prevent the nuisances from the depositing of ashpit-privy contents in the street during the day.

STANLEY.

T. BENSON, M.D., Medical Officer of Health.

Area in Acres, 2,006.

Estimated Population, 1896, 11,000.

Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
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37·9

19·3

4·3

187

Phthisis death-rate, 1·3.

Respiratory diseases death-rate, 2·1.

The general death-rate and infant mortality-rate are both lower than last year, though the latter is still high. The zymotic death-rate is very high, owing mostly to the high mortality from measles and scarlet fever.

Infectious Diseases.

The number of cases notified was 163, or 62 more than in the previous year. 133 of the cases notified were scarlet fever. Most of the cases occurred during the latter half of the year, and the case mortality was very high. Referring to this disease Dr. Benson says :—"The apathy with which "parents regard mild cases of scarlatina, coupled with "the long period of the convalescent stage, when "although the patient is practically in good health, yet "still suffers from infection, makes isolation utterly "impossible. No effort is made to avoid healthy "people, and this state of things conduces largely to "the spread of the disease." There was no marked prevalence of any other notifiable disease, There were more deaths from croup than there were cases notified, but no light could be thrown on the origin of any of the cases of either diphtheria or croup. Three of the 8 cases of enteric fever proved fatal, and Dr. Benson rightly says "that the large open uncemented

"privy-middens are, in my opinion, very likely receptacles to preserve the typhoid microbe." Measles was very prevalent from June to August, and altogether caused 18 deaths. Two cases of enteric fever were removed to the isolation hospital.

General Sanitation.

Sixteen houses at Shield Row, Stanley, and Havanna have been closed during the year on account of their insanitary condition, 10 of them permanently, and six others are to be dealt with if they are not put into a good condition. Dr. Benson again complains of the large number of unceiled bedrooms in the district (188). The Low Rows at South Moor are to have their sanitary condition improved shortly. A number of additional out-offices have been built and others improved at Joicey's Square, High Stanley, and Havanna, but "there remains a considerable number of unpleasant uncovered privy-middens that might be improved by instalments if not otherwise." The removal of refuse is stated to have been carried out in a satisfactory manner, and the slaughter-houses and dairies and cowsheds kept in good order. Sewage disposal works have not yet been provided for Stanley, nor has the extension of those at South Moor been made.

Sanitary Requirements.

1. The ceiling of the bedrooms of dwelling-houses.
2. The abolition of the insanitary midden-privies.
3. The extension of the South Moor sewage disposal works.

TANFIELD URBAN DISTRICT.

T. BENSON, L.R.C.P., Medical Officer of Health.

Area in Acres, 4,650.

Estimated Population, 1896, 7,300.

Birth-rate.

Death-rate.

Zymotic death-rate.

Infant Mortality-rate.

35·2

14·1

0·95

136

Phthisis death-rate, 0·68.

Respiratory diseases death-rate, 2·2.

The above statistics are very satisfactory, and considerably lower than in previous years.

Infectious Diseases.

There was no marked prevalence of any of the notifiable diseases, and only 65 cases were notified, 49 of these being scarlet fever, which was generally of a mild type, only one death resulting. There were only 2 cases of enteric fever and one of diphtheria reported during the whole year. An outbreak of measles occurred in June and spread over nearly the whole district, causing 2 deaths. There were 4 deaths from diarrhoea, but the disease was never prevalent. Disinfectants have been supplied to infectious cases and the houses fumigated where possible, but the report points out that thorough disinfection of the ordinary dwelling-house is almost impossible.

General Sanitation.

A number of sanitary improvements are reported to have been effected during the year, especially with regard to spouting and other defects of dwellings. At Fondley Set there is some slightly defective property, and at Friarside, though notices have been served for the repair of a number of houses, the village is without drainage, and there is no outfall provided for the sewage. At Lintz, Tantobie, White-le-Head,

Tanfield Lea, Red Row, and Crookgate Pit there is reported to be house property which is in need of improvement, and at Tanfield Hall especially the tenements appear to be in bad condition. At Hobson, Mountsett, Clough Dene, and Tanfield there appears to be no proper means of sewage disposal. The water supply of the district is stated to be good and abundant except at Busty Bank, Old Pit, and Causey Red Row, and these "should have attention before summer." The removal of refuse is said to have been carried out in a fairly satisfactory manner. Several cases of overcrowding were dealt with, without resort to legal proceedings. The dairies and cowsheds "were found in good order," and the "slaughterhouses created no nuisance."

Sanitary Requirements.

1. An improved water supply appears to be needed for Busty Bank, Old Pit, and Causey Red Row.

2. The defects of house accommodation at Tanfield Hall, and other places mentioned in the report should be removed.

3. At Friarside a system of drainage should be laid down, and sewage disposal works appear to be necessary for some villages.

TOW LAW URBAN DISTRICT.

JAMES WILD, L.R.C.P., Medical Officer of Health.

Area in Acres, 470.		Estimated Population, 1896, 4,554.	
Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
32·9	17·5	1·53	180
Phthisis death-rate, 1·1		Respirator diseases death-rate, 4·61	

The general, infant, and zymotic death-rates were all lower than in 1895.

Infectious Diseases.

Except for a statement that "whooping cough" and measles have been somewhat prevalent, but are "now on the decline," the report contains no reference to the prevalence of these diseases nor to the precautionary measures observed to prevent their spread.

General Sanitation.

The report refers to serious sanitary defects at Inkerman, Ridley Terrace, Dan's Castle, Brick Flatts, Railway Street, High Street, and Pit House. With regard to Ridley Terrace Dr. Wild says:—"As reported six months ago anything more objectionable than the state of the ashpits and privies would be difficult to conceive, and unless steps are taken to have them put right my reporting them from to time is simply little better than a farce."

The ashpits and privies are stated to have received better attention. The report recommends that drains which pass under houses should be taken up and their course altered, and that byres and hen-houses should not be allowed to communicate directly with pantries. If such defects exist as the above recommendations infer, they should certainly be remedied without delay.

Sanitary Requirements.

- I. The provision of isolation hospital accommodation.

2. The removal of the many insanitary conditions mentioned in the report, which can only be properly accomplished by the District Council systematically enforcing its powers under the Public Health Acts.

The report is **not** printed.

WHICKHAM URBAN DISTRICT.

A. W. ATTWATER, L.R.C.P., Medical Officer of Health.

Area in Acres, 5,961. Estimated Population, 1896, 9,870.

Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
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39·5	18·0	1·82	195
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Phthisis death-rate, 1·3.	Respiratory diseases death-rate, 2·0.
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The general death-rate again showed a slight increase, and the infant mortality-rate was very much higher than in previous years, the result, to some extent, of the epidemic prevalence of both measles and whooping cough.

Infectious Diseases.

The number of cases notified was again small (47). The 22 cases of scarlet fever were all of a mild type, and were scattered generally over the district. The enteric fever cases numbered 10, of which 6 were in Dunston. Measles and whooping cough were very prevalent in Dunston from April to July, and caused 15 deaths in this village. There were no cases of diphtheria or croup notified during the year, and there was an almost entire absence of diarrhœa. The district is still without an isolation hospital.

General Sanitation.

The scavenging of the district, undertaken by

the workmen of the District Council, "leaves a good deal to be desired, notably, emptying middens through the day instead of night or early morning." The report points out that the water supply is at times turned off for hours or even days, and that the company should in all cases give some hours' notice of their intention to turn it off. "The annual survey took place as usual, when all sanitary and other matters requiring attention were brought under your notice." One house at Swalwell has been closed as unfit for habitation. There were no prosecutions for exposing diseased meat or food for sale.

Sanitary Requirements.

Some improvements in the arrangements for the scavenging of the district appears to be desirable.

WILLINGTON.

R. E. BROWN, L.R.C.P., Medical Officer of Health.

Area in Acres, 3,795.		Estimated Population, 1896, 8,120.	
Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
38·6	19·4	2·8	146
Phthisis death-rate, 0·7.		Respiratory diseases death-rate, 3·0.	

The general death-rate is practically the same as in 1895, but there is a very marked reduction in the infant mortality-rate. But for the colliery disaster at Brancepeth Pit in April, which resulted in the death of 20 persons, the general death-rate would only have been 17·0 per 1,000.

Infectious Diseases.

The notified cases numbered 133, or 33 more than in 1895. The increase was entirely the result of

the greater prevalence of scarlet fever, of which 113 cases were notified as compared with 79 in the previous year. In the Willington district the disease was evidently of a severe type, as there were 8 fatal cases among the 81 notified. In the Stockley district there were 32 cases, but not a single death. There were only 9 cases of enteric fever reported, but 4 of these died, and the case mortality of this disease was also high. Measles was epidemic from May to August, and caused 7 deaths. Owing to its prevalence it was found necessary to close some of the schools. The district is still without an isolation hospital, but arrangements have been made with the Shildon urban and the Auckland rural districts so that joint action will be taken to provide the necessary accommodation.

General Sanitation.

A number of new houses have been built during the year, the sanitary conveniences being of the ashcloset type. The out-offices generally, however, consist of the ordinary ashpit and privy. The scavenging and removal of refuse is partly let by contract, and it is again urged in the report that the whole of the district should be scavenged by the District Council. All the house drains in the district are now believed to be trapped, but at Willington and Page Bank there are still some back-to-back houses. All the slaughter-houses except one are registered, and they have been kept in good condition, as have the two licensed common lodging-houses and the dairies. Some of the cowsheds are stated to be badly lighted. The recom-

mendation made in the report for 1895 as to the fencing of the dangerous roadway at Page Bank has been carried out.

Sanitary Requirements.

1. The District Council should undertake the whole of the scavenging in the district.
2. The back yards and surroundings of all dwelling-houses should be paved or cemented.
3. The report also recommends that the paving of the footpaths should be enforced in all private streets.

RURAL DISTRICTS.

AUCKLAND RURAL DISTRICT.

(No. 1 Division).

T. A. McCULLAGH, M.R.C.S., Medical Officer of Health.

Area in Acres, 18,005. Estimated Population, 1896, 28,210.

Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
27·2	14·8	2·48	185
Phthisis death-rate, 0·9.		Respiratory diseases death-rate, 1·9.	

The general death-rate is very low and much below the average of previous years.

Infectious Diseases.

The number of cases notified was 333, the most prevalent disease being scarlet fever (154 cases). Enteric fever was also prevalent (91 cases), and it was epidemic during the early part of the year at Riseburn, and also at Wesley and Brook Street, Coundon Grange, during the autumn. Dr. McCullagh thinks that the disease was spread at Riseburn by means of the ashpit

privies, which are too near the houses, and into which imperfectly disinfected typhoid excreta were thrown. At Coundon Grange where the fever was prevalent the inhabitants complained greatly of the smell from the sewer ventilators and of the insufficient flushing of the drains. The houses in Wesley Street are also said to have been built on "made" ground which consisted partly of the contents of privies and ashpits, and Dr. McCullagh says, "If this is really the case, there can be no cause for wonder that disease is rife in the street."

Measles was very prevalent and caused 28 deaths. Owing to its prevalence in February at Witton Park and Escomb, the schools were ordered to be closed. The report points on to the difficulty there is in getting people to meet measles seriously, although it causes such an enormous mortality, owing largely to the want of proper care of the patients. Although 52 cases of diphtheria were reported there was only 1 death, which appears to indicate that most of the cases notified were not true cases of diphtheria, as the case mortality from this disease is usually between 20 to 30 per cent. Joint hospitals are to be built for the isolation of infectious patients from this district, and from Shildon and Willington.

General Sanitation.

The District Council is now directly responsible for the scavenging and the emptying of ashpits in most of the populous townships, and the importance of this work is pointed out, seeing that it is becoming more

recognized that much of the typhoid fever and diarrhœa in the north of England is due to the privy-midden system. The scheme for the disposal of the sewage of Witton Park and Escomb has not yet been undertaken. At the request of the Parish Council an inspection of Byers Green was made, and some serious sanitary defects discovered, but the report does not state whether they have since been remedied. In Church Street, Coundon, and at Fair House, St. Helens, insanitary conditions are reported which should be removed without delay. Two samples of water were analysed, and one of them was found to be polluted and the supply condemned as unfit for use. 1,091 formal notices were served during the year, and 888 nuisances are stated to have been abated.

Sanitary Requirements.

1. The proper disposal of the sewage of Witton Park and Escomb.
2. The remedying of the insanitary conditions mentioned in the report.
3. The prevention of the pollution of the Riseburn Beck.
4. Arrangements should be made by which those in charge of infectious patients can obtain disinfectants without trouble.

AUCKLAND RURAL DISTRICT.

(No. 2 Division).

GEO. W. ELLIS, L.R.C.P., Medical Officer of Health.

Area in Acres, 43,393.		Estimated Population, 1896, 36,750.	
Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
32·8	14·9	1·8	149.
Phthisis death-rate, 0·7.		Respiratory diseases death-rate, 2·3.	

All the above mortality statistics are considerably lower than in the previous year, and are very satisfactory.

Infectious Diseases.

With the exception of scarlet fever, none of the notifiable diseases were at all prevalent, the number of cases notified during the whole year being 242, or only 8 more than in the last six months of the previous year. There were 147 cases of scarlet fever reported (6 deaths), but the disease was of a comparatively mild type. It was most prevalent in the West Auckland, Hunwick, and Helmington Row townships. There were 8 cases of diphtheria, and the one fatal case appears to have been caused by a nuisance from an insanitary ashpit. The majority of the 34 cases of enteric fever occurred in the Crook, West Auckland, and North Bedburn townships. The 4 fatal cases appear to have been caused by defective drainage or the consumption of polluted water ; but the probable causes of the non-fatal cases are not mentioned. There were 16 deaths from measles, which was especially prevalent in the Crook and North Bedburn townships, and in Firtree village it was so seriously epidemic that the schools had to be temporarily closed. Whooping cough was very prevalent, causing 32 deaths, the mortality being greatest in the Lynesack, Crook, and Evenwood townships. The mortality from diarrhœa was remarkably low (6 deaths), not more than one death occurring in any township. An arrangement has been made for the erection of joint

isolation hospitals for the district and the Shildon and Willington urban districts, and a Local Government Board enquiry was held in December into an application for the formation of these districts into a joint hospital district. There was no opposition, and it is expected that the necessary order will shortly be issued.

General Sanitation.

The scheme of supplying water from the Weardale and Shildon Water Company to Toft Hill and Land's Bank was completed during the year, and the report points out the necessity of extending the mains to Low Lands and Storey Lodge Pit, these places being greatly in need of a proper supply of water. A better water supply is also much needed for Evenwood Gate, Thrushwood, and the townships of Lynesack and Softly. It is recommended that the water of all wells used for drinking purposes should be periodically analysed. The report states that the sanitary condition of many parts of the district has been greatly improved "by the general repairs of the "houses, new drainage, erection of privies and ashpits, "and by a large supply of earthenware gulleys in place "of defective iron traps." The scavenging by contract of the more populous townships has been of great sanitary advantage, and it is strongly urged that the township of Evenwood should also be included in the scavenging contract. The necessity of the sewerage of many of the back streets of Crook is again urged, and Dr. Ellis says:—"Until this is done the town

"cannot be said to be in a sanitary state." The Oaks, Evenwood, is stated to be still in an insanitary condition, owing to defects of drainage, and the want of a new drainage system. At Sunnybrow the present arrangements for sewage disposal still continue to be very objectionable, and complaints have also been made respecting the means of sewage disposal at Hamsterley and Rumby Hill. A number of houses were dealt with under the Housing of the Working Classes Act, and closing orders were applied for against the owners of four houses.

The common lodging-houses have been kept in fairly good order, though the out-offices of one at Crook are very insanitary; and the cowsheds and dairies have been inspected from time to time, and found to be in a satisfactory condition. Three samples of water were analysed, and in each case the water was condemned as unfit for use. A very large number of formal and informal notices were served for the abatement of nuisances, and 968 are stated to have been complied with.

Sanitary Requirements.

1. The proper sewerage of the back streets at Crook.
2. A proper water supply for Lynesack and Softly, Low Lands, Thrushwood, and Evenwood Gate.
3. The scavenging by contract of the Evenwood township, and the removal of the insanitary conditions at the Oaks, Evenwood.
4. The proper disposal of the sewage of the villages of Sunnybrow, Hamsterley, and Rumby Hill.

BARNARD CASTLE RURAL DISTRICT

(Barnard Castle Division).

ALFRED H. SEVIER, M.B., Medical Officer of Health.

Area in Acres, 13,636.		Estimated Population, 1896, 1,004.	
Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
22·9	8·9	nil.	43

There were no deaths from phthisis or other respiratory diseases.

Infectious Diseases.

The only cases notified were 6 of scarlet fever, 2 of typhoid fever, and 1 of erysipelas. Owing to an outbreak of scarlet fever in the Langleydale district in the first quarter the schools were closed for eight weeks. The cases of enteric fever were attributed to the drinking of the water from a well which was highly polluted by sewage.

General Sanitation.

The sanitary condition of the district is stated to have been supervised as usual. The privies at Langleydale schools are stated to be defective, and alterations are required to put the place in a proper sanitary repair. The report contains no record of any sanitary work done in the district during the year, and no sanitary requirements are mentioned.

BARNARD CASTLE RURAL DISTRICT

(Middleton Division).

J. ATKINSON, L.R.C.P., Medical Officer of Health.

Area in Acres, 40,897.		Estimated Population, 1896, 3,804.	
Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
28·3	14·1	0·52	148
Phthisis death-rate, 0·79.		Respiratory diseases death-rate, 3·1.	

The death-rate from acute lung diseases was rather high, but all the other mortality statistics are satisfactory, and compare very favourably with those of recent years. The infant mortality was again high at Middleton, and is very likely caused by the improper feeding of very young infants. There was a considerable decrease in the death-rate at Middleton, but the rate (18·4) is still high for a village with such a situation and surroundings.

Infectious Diseases.

The only cases notified appear to have been 2 of erysipelas at Middleton. There was one death from membranous croup at Middleton, but it was not notified. It probably resulted from faulty drainage, which was quickly remedied. There were also a few cases of epidemic influenza in different parts of the district during the second and third quarters. There was one death from diarrhoea at Middleton.

General Sanitation.

The drainage scheme at Middleton is nearly completed, and it is expected that all the house drain connections will shortly be properly made to the new sewers. A system of drainage is also being laid down for Eggleston, and the District Council is urged to see that the house drain connections with the new sewers are properly trapped.

The mine shops in the district, as also the common lodging-house at Middleton, are reported to have been kept in a satisfactory state.

Many of the cowbyres are still in want of proper light and ventilation, and the slaughter-houses are not registered. No case of lead poisoning occurred at the smelting mill during the year.

Sanitary Requirements.

1. The recommendation as to the proper trapping of the house drains should receive attention.
2. Better light and ventilation are required for the cowbyres, and the slaughter-houses should be registered.

BARNARD CASTLE RURAL DISTRICT
(Staindrop Division).

JAMES BEATTIE, L.R.C.P., Medical Officer of Health.

Area in Acres, 25,494. Estimated Population, 1896, 6,350.

Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
29·6	15·7	2·5	223
Phthisis death-rate, 0·4.		Respiratory diseases death-rate, 2·3.	

The general, zymotic, and infant death-rates are all very much higher, the last-named being especially excessive as a result, largely, of the prevalence of measles and whooping cough, and probably also maternal carelessness and improper food. At Cockfield 23 of the 33 deaths were under 5 years of age. The highest general death-rate was in Cockfield township (20·6), and the lowest in Winston township (9·0). The mortality from phthisis was again very low, and Dr. Beattie points out that it is least prevalent in the most exposed portions of the district.

Infectious Diseases.

Only 14 cases were reported under the Notifi-

cation Act. The 7 cases of scarlet fever were all in the Staindrop district, and on account of its occurring at Langleydale the schools were closed for several weeks, and a general epidemic avoided. One fatal case of diphtheria occurred at Cockfield, and there were 4 cases of enteric fever at Woodland and 1 at Gainford, 3 of these proving fatal. Three of the cases in Woodland probably resulted from direct infection, in one instance through the milk. No insanitary condition likely to cause the cases was discovered, and the water supply was good. Measles was epidemic in many parts of the district, and caused 5 deaths. The schools at Cockfield, Ingleton, Staindrop, and Woodland were closed for 3 weeks, but the result was not satisfactory, as very few families escaped the disease. In many cases there were second attacks of the disease. Whooping cough was also generally prevalent, and caused 7 deaths, 3 of which were at Cockfield.

General Sanitation.

At Cockfield and Woodlands additional house accommodation is much needed, as there is a tendency to overcrowding, and considerable vigilance had to be exercised at Cockfield to prevent it.

The general sanitary condition of the district as a whole shows a gradual improvement, and the removal of excrement and house refuse is stated to have been better performed. The surroundings of the Brick Flatts, Woodlands, are still, after wet weather, in an insanitary condition. The water supply of Staindrop and Cockfield is stated to be satisfactory.

The report contains no record of any sanitary works undertaken in the district during the year.

Sanitary Requirements.

1. Additional dwelling-houses at Cockfield and Woodland.

2. The remedying of the defects at Brick Flatts, Woodlands.

CHESTER-LE-STREET RURAL DISTRICT.

JOHN TAYLOR, M.D., D.P.H., Medical Officer of Health.

Area in Acres, 34,869.		Estimated Population, 1896, 56,699.	
Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
38·1	19·1	3·72*	182
Phthisis death-rate, 1·07.		Respiratory diseases death-rate, 2·91.	

The report points out the difficulties in the way of accurately estimating the population owing to the long intercensal period, and that probably the estimated population is much under estimated. During the year a portion of the township of Craghead, with a population of about 1,300, was transferred to the Lanchester Union, but for the statistical purposes of the report it is included in the Chester-le-Street district up to the end of 1896.

The birth and general death-rates are both slightly lower than in the previous year, but the zymotic death-rate is higher.

There were 110 uncertified deaths in the district, chiefly the result of unqualified medical

* Including 37 deaths from "enteritis" and "gastro-enteritis," which increase the zymotic death-rate 0·65 per 1,000 population.

practice, and Dr. Taylor suggests as a means of restricting and ultimately putting an end to unqualified practice that the General Medical Council should register all men who have been bona-fide unqualified assistants for two years, such men to be employed only under the direct supervision of their qualified employers.

Infectious Diseases.

The notifications numbered 849, an increase of 138 as compared with 1895, and 553, or over 67 per cent., were scarlet fever. The deaths from scarlet fever numbered 28, equal to a case mortality of 5 per cent., the mortality being much less among the patients treated in the isolation hospital than among those nursed at home. A curious outbreak of illness occurred in February and March in the Dame Margaret's Home, Washington, some of the cases being notified as scarlet fever and others as diphtheria and erysipelas. After very careful enquiry Dr. Taylor thinks that the milk supply was probably responsible for the outbreak, for on each occasion the milk was boiled the outbreak ceased. There were 108 cases of typhoid and continued fevers (14 deaths), but these diseases were never epidemic, the most cases being reported from the Witton Gilbert and Chester-le-Street townships. Diphtheria and croup were not at all prevalent, and caused only 9 deaths. Measles was seriously epidemic in nearly every part of the district, and caused 94 deaths. The great majority of the fatal cases were under 2 years of age. Dr. Taylor points out the biennial prevalence of measles,

and the fact that though parents think the disease a very trifling ailment it caused more deaths than all the other infectious diseases. He does not think the notification of measles desirable except in a modified form, such as the notification of the first case only in each family, and he thinks that persons visiting infected houses, and parents allowing such visiting, should be liable to prosecution. Owing to the prevalence of measles many of the schools in the district were closed either voluntarily or by the order of the District Council, but Dr. Taylor has some doubt as to the value of school closure in populous districts. There were 25 deaths from diarrhœa, and 37 from gastro-enteritis, a considerable decrease on the previous year, and it is pointed out that these diseases do not entirely result as is often stated from improper feeding, but largely depend on the generation of an ærial poison at a certain temperature from a polluted soil. 121 patients were admitted to the hospital during the year, and Dr. Taylor clearly points out the advantages which result from such isolation. The accommodation at the hospital is stated to be inadequate, and some more systematic method of disinfection is advocated.

General Sanitation.

Most of the places mentioned in the previous annual report have now been supplied with water. A supply is shortly to be provided for Granby Terrace and Upper and Lower Streetgate ; and for Havannah Terrace and Raft Yard in the Washington township. The supplies to the villages of Lumley and Fatfield

and the hamlet of Houghton Gate are not satisfactory. The removal of refuse is well done in the Chester-le-Street township, where the work is performed by the Council's workmen, but in the Washington and Birtley townships, where the work is let by contract, systematic inspection is necessary for the proper performance of the work. In other parts of the district, where no contract exists, the out-offices frequently get neglected. The sanitary improvements effected during the year include the spouting of a large number of houses at Fatfield, Ouston, and Perkinsville; additional or improved out-offices at Fatfield, Eighton Bank, Upper and Lower Streetgate, Kibblesworth, Lumley and Pelton; the sewerage of part of Portobello, the trapping of house drains at Fatfield, and the means of flushing the sewers in North and South Burn, Chester-le-Street, and Birtley; the making sanitary of a number of houses at Low Flatts, Fatfield, Washington, and Pelton, &c. The sewerage of Fatfield and of the hamlet of Sunnyside is about to be undertaken. The drainage of Lumley is stated to be defective, and a large number of preliminary notices have been served with regard to insanitary property in this village. Unsatisfactory dwelling-houses are stated to exist at D Pit Square, Old Burnmoor, Eden Square, and Witton Gilbert. Statutory notices under the Housing of the Working Classes Act were served relative to 11 houses, and several of them were ultimately closed. There was one seizure of unwholesome food, but no legal proceedings were taken. There are no bye-laws

in the district for the regulation of slaughter-houses, and no systematic inspection is made of such premises, though the necessity of doing so is pointed out in the report.

Sanitary Requirements.

1. A proper steam disinfecting apparatus and more systematic disinfection of infected houses and articles.
2. Improved water supplies for the villages of Lumley and Fatfield and the hamlet of Houghton Gate, and improved drainage for Lumley.
3. The District Council should undertake or contract for the scavenging and the removal of the refuse of the populous portions of the district.
4. Bye-laws for the regulation of slaughter-houses and the systematic supervision of such premises.

DARLINGTON RURAL DISTRICT.

CHARLES M. HARDY, M.B., Medical Officer of Health.

Area in Acres, 42,034.		Estimated Population, 1896, 9,367.	
Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
24'0	12'4	1'17	133
Phthisis death-rate, 0'4.		Respiratory diseases death-rate, 1'9.	

There is an increase in the birth-rate which, however, is still very low, and the general death-rate and infant mortality-rate are both lower than in 1895.

Infectious Diseases.

The number of cases notified increased from 41 in 1895 to 104, owing to the greater prevalence of scarlet fever, of which disease 83 cases were reported. In January, scarlet fever became so seriously prevalent

at Middleton-St.-George and Aycliffe that it was necessary to close the schools. At the former place the disease may have been spread by the aggregation of the children at a school treat. There were 8 cases of enteric fever, 2 of which were at Cockerton and 3 at Aycliffe. The probable cause of the outbreaks is not stated, but it is probable that two of the cases at Aycliffe were imported from Shildon. Measles and whooping cough were both very prevalent during the early part of the year, especially in the western part of the district. Owing to these diseases and an epidemic of ophthalmia it was necessary to close the schools at Denton. As far as possible infectious patients are, it is stated, removed to the isolation hospital at Darlington, and the infected houses disinfected afterwards. Disinfectants are also supplied.

General Sanitation.

The water supply is stated to be in good condition, "but it would be much better if a good many "private wells were done away with, and some general "system adopted." At Middleton-One-Row and Hurworth great improvements are reported with the view of preventing the pollution of the Tees. Very little has been done to prevent dampness to the houses, and the report again points out the seriousness of this defect, especially in districts chiefly built with limestone. The dairies, cowsheds, and slaughter-houses are stated to have been regularly inspected, and the milksellers registered.

Sanitary Requirements.

1. The District Council should exercise careful supervision over all shallow wells, the water of which is used for drinking purposes.

2. Energetic action should be taken to prevent the dampness of houses by spouting and the removal of other defects that contribute to it.

DURHAM RURAL DISTRICT

(Eastern Division).

W. A. HEPBURN, M.D., Medical Officer of Health.

Area in Acres, 15,324. Estimated Population, 1896, 15,681.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

38'2

21'0*

3'2

199

Phthisis death-rate, 1'1

Respiratory diseases death-rate, 4'0

The general death-rate is rather high, and the zymotic and infant mortality-rates are much above the average, the result largely of the fatal prevalence of measles and whooping cough.

Infectious Diseases.

The notifications received numbered 107 as compared with 158 in 1896. Scarlet fever was the most prevalent disease (67 cases), and it caused 6 deaths—a rather high mortality. Of the 12 cases of enteric fever 2 died, and there was one death from membranous croup. 6 patients were removed to the isolation hospital for treatment. All cases of fever were visited by the medical officer of health, and the necessary instructions given, and, where children from infected houses were attending school, certificates were

* The death-rate given in the report was 20'1 per thousand, but this does not include 14 deaths occurring in public institutions outside the district, which belonged to it.

sent to the schoolmaster. Measles was epidemic throughout the district, and caused 24 deaths. Owing to its prevalence the schools were closed at Sherburn, Sherburn Hill, and New Durham. Whooping cough was also very prevalent, and was responsible for 16 deaths. Dr. Hepburn is of opinion that the co-operation of school authorities with the local authority is of the greatest importance as a means of controlling the prevalence of measles.

General Sanitation.

The water supply to Cassop Colliery has been greatly improved by the owners of the colliery. One sample of well water from Shincliffe was analysed and reported to be of good quality. A number of notices were served for the abatement of nuisances resulting from the accumulation of refuse and manure, and received attention. In the Coxhoe township 20 insanitary houses have been closed, and at East Hetton very important improvements have been made to the majority of the houses and their surroundings. At Cassop Colliery about 40 houses have been rebuilt and others repaired, and improvements in dwelling-houses have also been made at Sherburn, Littleton, and Broomside Lane.

Improvements in the sewerage of Ludworth, Cassop Colliery, Sherburn Village, and Littleton have been carried out during the year, and at East Hetton the open channels have been repaired where necessary.

No sanitary recommendations are made in the report.

DURHAM RURAL DISTRICT. (Western Division).

EDWARD JEPSON, M.D., Medical Officer of Health.

Area in Acres, 15,730. Estimated Population, 1896, 11,460.

Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
33·2	18·7	3·1	162
Phthisis death-rate, 1·04.		Respiratory diseases death-rate, 3·83.	

The general and zymotic death-rates are both very much higher than in the previous year, the increase of the latter being the result of the large mortality from measles and whooping cough.

Infectious Diseases.

The notified cases numbered 81 or just 100 less than in 1895. The majority of these cases were scarlet fever (58), but only 1 of them ended fatally, so that the disease was evidently of a mild type. It was most prevalent during March and April, and at Bearpark, Broompark, and Croxdale Collieries. There were only 7 cases of enteric fever reported, and no death resulted. Measles was seriously epidemic at Croxdale and Brancepeth in February, at Kimblesworth in April, and at Framwellgate Moor in September, and it was found necessary to close the schools at these places on account of its prevalence; 22 deaths resulted. In July, Dr. Jepson recommended the compulsory notification of the disease, but his advice was not acted upon. There were 10 deaths from whooping cough. Five cases were treated in the isolation hospital, and "if the hospital were more freely used there would be a less number of cases of fever to deal with."

General Sanitation.

The number of notices served with respect to insanitary dwellings or for the abatement of nuisances was 156. There is stated to have been no occasion to analyse any samples of drinking water during the year. Some property on Framwellgate Moor is said to require attention, the notices that have been served respecting it not having been complied with. "The foul state of the ashpits and privies in Broompark Colliery is not yet rectified ; these structures are not made according to the bye-laws."

Sanitary Requirements.

1. The enforcement of the notices respecting the defective property at Framwellgate Moor.

2. The removal of the foul conditions connected with the ashpits and privies at Broompark Colliery village.

EASINGTON RURAL DISTRICT.

JAMES ARTHUR, L.R.C.P., D.P.H., Medical Officer of Health.

Area in Acres, 36,942.

Estimated Population, 1896, 42,563.

Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
38'5	18'6	2'6	174
Phthisis death-rate, 1'76.		Respiratory diseases death-rate, 2'27.	

The estimated population is stated to be less than in 1895, the result probably of the closing of some of the collieries in the district. With the exception of the phthisis death-rate, all the above statistics compare favourably with those of the previous year.

Infectious Diseases.

The number of cases notified was 466, and more than half of these were scarlet fever. The type of this disease was generally mild, and the case mortality was only 2·5 per cent. Its greatest prevalence was in Haswell and Seaham, but there was not a single case reported from Thornley. Neither diphtheria nor membranous croup were at all prevalent, only 12 cases of these diseases being notified, and doubt is cast in the report on the accuracy of the diagnosis of some of these cases. The cases of enteric fever reported numbered 54, a considerable decrease on the number notified in previous years, and there was also a considerable decrease in the mortality. As is usually the case, the disease was most prevalent during the last half of the year, 43 of the cases being notified during that period. The medical officer of health states that each individual case was the subject of enquiry on his part, and as a result he was able to generally exclude the water and milk supplies and drainage as causes of the fever. A few of the cases were imported, and a few others the result probably of the drinking of impure water not intended to be used for domestic purposes, but the result of Dr. Arthur's enquiries seems to point to the disease having been mostly spread, if not actually caused, by the agency of midden-privies usually placed in close proximity to the dwelling-houses. Where the people themselves are dirty, the risk of the development and spread of enteric fever is all the greater.

There were 63 cases of continued fever notified, and many of these were probably mild cases of enteric fever, but only two of the cases ended fatally. Measles was fatally epidemic in nearly every part of the district, the only portion escaping its visitation during the year being Murton, and 42 deaths resulted. On account of its prevalence, the schools at Hutton Henry and Monk Hesleden were temporarily closed, and at Haswell the scholars from infected houses were excluded from school. Whooping cough caused 17 deaths, and was prevalent in different parts of the district during the first three quarters of the year. Diarrhœa was responsible for 27 deaths, the greatest mortality being in the Seaham district. Eight cases of infectious disease were treated in the isolation hospital, and a new hospital for the district is stated to be in course of erection near Easington.

General Sanitation.

There have been considerable sewer extensions in the district, notably at Wheatley Hill, Easington, and Davy Lamp, while at Trimdon, Thornley, Station Town, and South Hetton improvements in the sewerage have been effected. About 70 houses have been provided with privy and ashpit accommodation during the year.

A scheme for supplying Wingate Lane, High Wheatley Hill, and Old Wingate with water has been decided on, and a new water company has, during the latter half of the year, been supplying Wingate, Station Lane, and a large part of Castle Eden satisfactorily.

Of four samples of water analysed, one was found to be polluted, and another was of doubtful quality.

Notices under the Housing of the Working Classes Act have been served on 32 owners of property in different parts of the district. Some of them have been complied with, and others are stated to be sub-judice.

The District Council have decided to undertake the scavenging of Wingate, Haswell, and Shotton. Three additional dairies and cowsheds have been registered, and these, as well as the common lodging-houses, have been kept under observation. An assistant sanitary inspector was appointed during the year.

Sanitary Requirements.

None specially mentioned, but the results of the enquiries of the medical officer of health into the causes of enteric fever suggest that there are many nuisances arising from the position and defective construction of ashpit-privies, which require to be dealt with.

HARTLEPOOL RURAL DISTRICT.

S. GOURLEY, M.D., Medical Officer of Health. .

Area in Acres, 18,368. Estimated Population, 1896, 2,500*.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

30·8

10·4

0·4

90

Phthisis death-rate, 0·4.

Respiratory diseases death-rate, 2·0.

There is an increase in the birth-rate, but all the chief mortality statistics compare favourably with

*There is also in the district a population of 460 in the union work-house and port sanitary hospital, and 93 deaths occurred in these institutions during 1896, and have been apportioned to the proper districts.

those of the previous year, and are very satisfactory.

Infectious Diseases.

The only cases reported in the rural district were 2 of scarlet fever and 1 of typhoid fever. One case of erysipelas was notified from the workhouse. In the previous year 32 cases were reported in the district. Instructions as to proper isolation and disinfectants have been supplied to each house in which infectious cases occurred. The only zymotic death was 1 from diarrhœa.

General Sanitation.

Many useful improvements in drainage, spouting, and repairs have been made during the past year, and at Elwick some drainage work has been effected, and when the house drains are properly connected there will be a great improvement. The water supply was examined and found satisfactory, and the dairies have been regularly inspected, are registered, and in good order. More new cottages are stated to be still needed at Greatham to meet the needs of the occupants of the old houses, and for workmen at the salt works. Some of the roads in the district are said to be in a very bad condition owing to want of reasonable repair. 75 informal and 3 formal notices were served for the abatement of nuisances, but no legal proceedings were necessary.

Sanitary Requirements.

1. Additional house accommodation at Great-ham.
2. The roads in the district should be kept in proper repair.

HOUGHTON RURAL DISTRICT (Northern Division).

D. S. PARK, F.R.C.S., Medical Officer of Health.

Area in Acres, 8,399.		Estimated Population, 1896, 14,140.	
Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
38·1	18·6	3·1	171
Phthisis death-rate, 1·2.		Respiratory diseases death-rate, 3·04.	

The zymotic death-rate was considerably higher than in the previous year, but there was a reduction in the infant mortality-rate. Dr. Park is of opinion that the population of the district is underestimated.

Infectious Diseases.

The number of cases notified was 189 as compared with 144 in 1895, the increase being the result of the greater prevalence of scarlet fever, which was especially marked during the first half of the year. The disease was generally of a mild type, and 3 of the 4 deaths occurred in the Newbottle township. Dr. Park thinks that the infection of the fatal cases was imported from Sunderland. Three of the eight notified cases of diphtheria proved fatal, all the deaths occurring in the Newbottle township, as did all the five deaths from membranous croup. In connection with several of the cases there was dampness and defective drainage. Enteric fever became somewhat prevalent in September, though to a less extent than in the previous year. The case mortality, however, was much higher, and Dr. Park points out that a high case mortality from typhoid during the fourth quarter of the

year has occurred in previous years. The disease appears to have been most prevalent in the New Herrington, Penshaw, and Sunnyside districts, and 8 of the 10 deaths occurred in the townships of Newbottle and West Herrington. Defective sewer ventilation and imported town manure were probably responsible for some of the cases, but in discussing the relation between a pollution of the water supply and the prevalence of enteric fever Dr. Park says, "we are aware that the Newbottle and Penshaw water is subject to some such intermittent pollution, and in my opinion it is not improbable that the sudden and obscure outbreaks from which we occasionally suffer now may be due to similar causes modified in their effects by the limited amount of specific pollution." Measles became epidemic in the Newbottle and Herrington districts in May and October necessitating the closure of the schools, which action had a good effect in checking the spread of the disease. Whooping cough was also epidemic during the first quarter, but the whole district was singularly free from diarrhœa. Only 2 cases were treated in the isolation hospital, and the report states that there is still an objection on the part of many of the inhabitants to make use of the hospital. The usual precautions adopted in previous years were taken to prevent the spread of infectious diseases.

General Sanitation.

The water supplied to the Newbottle and Penshaw districts is liable to intermittent pollution, and

three samples of the water analysed at the beginning of this year were reported by the county analyst to be contaminated by unfiltered water. The water, however, was not proved to have had any ill effect on those drinking it during the year, though Dr. Park's remarks on the possible connection between the water supply and obscure outbreaks of enteric fever must not be overlooked. The inhabitants at Black Boy who depended for their water supply on the polluted draw well have now been provided with a pure supply, and a new water supply has been provided for West and Middle Herrington. At Warden Law, however, some of the inhabitants appear to be at present without a proper supply.

Seven insanitary houses at Philadelphia were closed by order of the magistrates. Nuisances were caused during the year by the importation of town manure, but steps have since been taken to, as far as possible, prevent their recurrence. Notice was served with regard to one insanitary cowshed, but the dairies, cowsheds, and slaughter-houses, have as a whole been well kept. Several cases of overcrowding were dealt with during the year.

The scavenging has generally been well performed, the whole of it being let by contract.

A large amount of sanitary work has been done in the district during the year, and the more important improvements are mentioned in the report, and include the repairing of dwellings, the provision of improved privy accommodation and drainage, the

making and paving of streets and footpaths, &c. The District Council are negotiating with the Railway Company to carry out a scheme for the prevention of the pollution of a stream near Fence Houses station by the sewage of about 60 houses.

Sanitary Requirements.

The provision of a safer water supply for the Newbottle and Penshaw districts is very desirable.

The report is **not** printed.

HOUGHTON RURAL DISTRICT (Southern Division).

J. R. SUTHERLAND, L.R.C.P., Medical Officer of Health.

Area in Acres, 4,791. Estimated Population, 1896, 5,100.

Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
35'5	16'0	1'9	154
Phthisis death-rate, 0'78.		Respiratory diseases death-rate, 3'1.	

The above statistics are fairly satisfactory, although the zymotic death-rate was considerably increased as the result of the epidemic prevalence of measles and whooping cough. Owing to the closing of the Rainton collieries the population has been considerably reduced.

Infectious Diseases.

None of the notifiable diseases were prevalent, only 30 cases being reported, of which 15 were scarlet fever. There was one death from typhoid fever at Moorsley. Measles caused 5 deaths, and owing to its prevalence it was necessary to close the schools at Middle Rainton and Leamside for a time. Whooping cough was also very prevalent during the first quarter,

and during the year caused 4 deaths. One case was treated in the isolation hospital, which is constructed of iron and wood, and is stated to be causing some trouble and expense owing to its defects.

General Sanitation.

In his last annual report the medical officer of health pointed out the need of a better water supply to the Stables farm, and to White House, Pit House Lane, but this has not yet been provided. Owing to the cutting off of the water from Warden Law, there are three houses at Pittington Engine, and two other houses without any proper water supply, and the laying on of Waskerley water is recommended, especially as the inhabitants are carrying the water from an objectionable source.

Considerable sanitary improvement has been effected at Moorsley by spouting, provision of improved privy accommodation, &c. At Middle Rainton the sewerage has been improved, but nothing has been done for the improvement of the drainage at the Freehold, and the laying down of a covered system of drainage is again recommended. The village of Middle Rainton is reported to be in a bad state owing to the bad condition of the streets and houses, and the dirty habits of many of the inhabitants. At West Rainton the scavenging of the district is satisfactory, but in other parts of the district the inspector has frequently had to complain of neglect.

Sanitary Requirements.

1. The provision of a proper water supply for

the Stables Farm, White House, and the houses at Pittington Engine and Robney.

2. A covered system of drainage for Rainton Freehold.

3. Attention to the sanitary condition of Middle Rainton, and an improvement in the scavenging in some parts of the district.

LANCHESTER RURAL DISTRICT.

(Lanchester Division).

J. WILSON, M.D., Medical Officer of Health.

Area in Acres, 29,956. Estimated Population, 1896, 16,419.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

38·5

20·5*

2·49

165

Phthisis death-rate, 1·09.

Respiratory diseases death-rate, 4·81.

The general death-rate was somewhat lower than in the previous year, but the mortality from acute lung diseases was again high.

Infectious Diseases.

There was a very marked decline in the prevalence of the notifiable diseases, only 178 cases being reported as against 549 in the previous year. Scarlet fever was the most prevalent disease (115 cases), and its case mortality was high, there being 8 deaths. There were 12 cases of enteric fever, and 4 of them died. Of the 6 cases of membranous croup notified, no fewer than 5 proved fatal. Cases of measles were scattered over the district, and the disease was epidemic in Esh township. There were 8 deaths, and there were also 9 deaths from diarrhœa, and 6 from whooping

* Excluding 37 deaths not belonging to the district, the death-rate would be 18·2 per 1,000.

cough. 20 cases of infectious disease were removed to the new isolation hospital.

General Sanitation.

The report deals with the sanitary condition of most of the villages in the district, and a very large number of serious sanitary defects are reported. At Langley Park some improvements in drainage have been effected, "but a considerable portion of the private "property here is in an unsatisfactory condition," notably Forster's houses, and the property from the east end of Quebec Street to the post office, where the condition of the yards and out-offices is most objectionable. At Hamsteel's Colliery two of the huts have been made habitable, and unless the others are similarly dealt with they should be closed. Some of the houses in the village have been spouted and repaired, but the defects of drainage at the High Row complained of in Dr. Wilson's last annual report have not been remedied, nor have his recommendations for the sanitary improvement of the village—which included a proper system of drainage, the cementing of the defective yards, and better ventilation about the houses—been adopted. At Quebec the houses have been spouted and the village properly sewered, but a number of the ashpits require re-roofing, and it is advised in the report that the walls dividing the yards should be pulled down to allow of a better current of air about the houses.

At Cornsay Colliery the defective sewerage of Commercial Street has not yet been remedied, and no improvement in the ashpits has been made, although

they are very large, uncovered, and objectionable, and their covering over was recommended in last year's report. At East Hedleyhope the drainage consists of insanitary open channels, the ground about the houses is uncemented and damp, the scavenging of the out-offices is not properly attended to, and the out-offices at the school were in a very insanitary state, and probably the cause of a case of enteric fever among the staff. At the villages of Satley and Lanchester a large number of serious sanitary defects are reported to exist owing to dampness and other defects of dwellings, and want of proper privy accommodation and drainage. The out-offices at Lanchester school do not receive proper attention.

The following passages from Dr. Wilson's report so accurately describes some of the serious sanitary defects, commonly to be met with, that I quote them in extenso :—

“There are two or three matters I am anxious to emphasise in this report as they are of the greatest importance to the health of the inhabitants of this neighbourhood. There are many badly constructed, leaky, and uncovered ashpits in this district, and the foetid liquids they contain pass by soakage on to the surrounding soil and thus become a dangerous nuisance. Ashpits of this class should be replaced by well built covered ones, and their floors properly cemented.

“The ashpits in crowded places, such as our colliery villages, should be more frequently emptied

“ than they have been during the year. I can only repeat
 “ what I have said on previous occasions, that they ought
 “ to be cleaned out and disinfected at least once a
 “ fortnight. Colliery Owners make a great mistake in
 “ not seeing to this, as much of the health of their
 “ workmen and their families depend upon it. The yards
 “ in connection with a great number of the houses in this
 “ district are unpaved, very cold and damp, and therefore
 “ predispose the inmates to rheumatism, neuralgia, and
 “ bronchitis. This state of matters should be altered,
 “ and every yard should be drained and properly paved
 “ or cemented. The privies and urinals in connection
 “ with the schools are, in some instances, permitted by
 “ the managers to get into an insanitary condition. The
 “ volatile effluvia from decomposition of urine products
 “ and fœcal matter pollute the air of the play-ground,
 “ which must have a baneful influence upon the health of
 “ the children.”

Sanitary Requirements.

The most careful attention of the District Council should be given to the matters contained in the report, and action should specially be taken for the removal of the defects at Hamsteels, Cornsay Colliery, Langley Park, East Hedleyhope, Satley, and Lanchester.

The general sanitary condition of the populous portions of the district would be greatly improved by the District Council undertaking the scavenging.

LANCHESTER RURAL DISTRICT.

(Medomsley Division).

W. T. BOLTON, L.R.C.P., Medical Officer of Health.

Area in Acres, 21,213.

Estimated Population, 1896, 7,774.

Birth-rate.

Death-rate.

Zymotic death-rate.

Infant Mortality-rate.

32'0

18'9

3'2

108

Phthisis death-rate, 1'2.

Respiratory diseases death-rate, 2'0.

The zymotic death-rate is high, and much above the average, but the infant mortality-rate is very low, and compares favourably with the average rate of previous years.

Infectious Diseases.

There were 106 cases of scarlet fever among the 148 cases notified. Nearly all the cases and all the deaths occurred in the Medomsley township. Enteric fever was not so prevalent as in the previous year, but there were, nevertheless, 16 cases, 4 of which ended fatally. Nothing is said in the report as to the causes which were responsible for the cases. Measles was epidemic in the Medomsley district during the last half of the year, and the schools in that district had to be closed for several weeks, owing to its prevalence. One case of enteric fever was removed to the isolation hospital for treatment.

General Sanitation.

The water supply to the district has generally been satisfactory, and the wells which supply the village of Rowley are stated to have been improved so as to protect the water from surface contamination.

The defective houses at Hamsterley Colliery are reported to have been rectified. At Blackall Mill a complete system of drainage has been laid down, and the sewage disposal works at Croniwell are now in working order, with good results. At Blackall Mill, and in other parts of the district, additional privies and covered ashpits have been erected.

The scavenging of the villages, where it is undertaken by the colliery owners, is said to be generally satisfactory, "but considerable difficulty is experienced in respect to private dwellings." In the Muggleswick district 5 old damp houses have been put into a sanitary condition.

"The dairies in the district are in a fairly good condition, but as a rule the cowsheds are insufficiently lighted, though they are well ventilated."

Sanitary Requirements.

No reference made to them, though the scavenging of the conveniences of private dwelling-houses appears to require the attention of the District Council.

LANCHESTER RURAL DISTRICT

(Stanley Division).*

T. BENSON, L.R.C.P., Medical Officer of Health.

Area in Acres, 3,096. Estimated Population, 1896, 9,000.

Birth-rate.	Death-rate.	Zymotic death-rate.	Infant mortality-rate.
39·5	19·1	2·88	143
Phthisis death-rate, 1·55.		Respiratory diseases death-rate, 2·44.	

*This district was toward the end of October formed into the Annfield Plain urban district, which also includes a portion of the parish of Greencroft. The estimated population of the new urban district is given as 10,700 to the middle of 1896, and for the last ten weeks of the year the birth and death rates of this district were respectively equal to rates of 40·7 and 20·9 per 1,000.

The zymotic death-rate is somewhat high owing to the large mortality from measles.

Infectious Diseases.

The number of cases notified was small, only 48, and of these scarlet fever constituted the greater number (26). The cases mostly occurred during the first five months of the year at Dipton and Kyo. The 2 cases of diphtheria both ended fatally. There were 10 cases of enteric fever, and some of the cases may have resulted from pollution of the subsoil by soakage from defective out-offices. Measles was very prevalent from May to the end of July, and again towards the end of the year throughout the greater part of the district. The disease was responsible for 16 deaths, and the "half-way schools were the chief medium in "spreading the mischief." Disinfectants were supplied to infected houses, but the difficulty of properly disinfecting the houses in the district, owing to there being no suitable refuge for the occupiers during the process, is pointed out.

General Sanitation.

Several insanitary houses have had their defects remedied, and notices were served with regard to others at Dipton, but at the end of the year the necessary repairs had not been completed. At Annfield Plain and Loggan Houses a number of new out-offices have been built, and several others in different parts of the district were repaired.

An improved water supply has been provided to a number of houses in Kyo village and Kyo West

Houses, and the pollution of a stream at Annfield Plain has been stopped. The removal of refuse is stated to have been fairly well performed. The slaughter-houses have been well kept, but several of the dairies are said to require more light and ventilation. The only licensed common lodging-house in the district also requires improvement.

Sanitary Requirements.

The provision of proper light and ventilation for the dairies and cowsheds should be insisted upon.

SEDFIELD RURAL DISTRICT.

G. R. SHERATON, L.R.C.P., Medical Officer of Health.

Area in Acres, 43,025. Estimated Population, 1896, 18,432.

Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
40·0	18·7	2·2	168
Phthisis death-rate, 1·0		Respiratory diseases death rate, 2·8	

All the above mortality statistics are below the average of previous years, though the zymotic death-rate is slightly higher than in 1896. There were 150 deaths in the County Asylum not belonging to the district, and therefore not included in the above statistics.

Infectious Diseases.

Of the 225 notified cases the majority were scarlet fever (134 cases), which was generally prevalent throughout the year, but it was of such a mild type that not a single death resulted. Owing to an outbreak at Bishop Middleham the village school was closed for a time. All the four notified cases of diphtheria occurred at Cornforth, but there were 4

deaths from croup in the Ferryhill township, though only one case was notified. 34 cases of enteric fever were reported, the disease, as in previous years, being most prevalent in the Cornforth and Trimdon townships. As to its prevalence at Trimdon Colliery Dr. Sheraton says :—" I have so frequently referred to the "deplorable condition of the Trimdon Colliery villages "where enteric fever appears to have found a congenial "soil for its propagation, to repeat which is a tiresome "iteration : it is, however, but justice to the owners of "the colliery to say that they are making considerable "progress in the reconstruction of the houses belonging "to them, a work of considerable magnitude, as out of "about 700 dwellings in the villages 500 belong to "them, and with the exception of those already re- "built the whole will require to be reconstructed." Measles was generally prevalent and caused 17 deaths, and owing to its prevalence at Bishopton it was necessary to close the school. Diarrhœa and whooping cough each caused 7 deaths, the former being much less prevalent than usual. The district is still without an isolation hospital, and the report urges the District Council to seriously consider the question.

General Sanitation.

About 800 yards of sewer extensions have been made in the district during the year, and the house drainage and means of excrement disposal are stated to have been much improved. Arrangements are being made for the laying down of sewage disposal works for several villages. The water supply of the

district has been satisfactory, and extensions of the water mains have been made at Ferryhill and Trimdon.

Legal proceedings were taken under the Housing of the Working Classes Act with regard to 43 houses, and were successfully sustained, as were also 16 prosecutions under the Public Health Act for nuisances. The common lodging-houses, dairies, and cowsheds are stated to have been kept in a satisfactory condition. Nuisances from accumulations of house refuse have been of frequent occurrence, and as a consequence an enquiry was held towards the end of the year by one of the medical inspectors of the Local Government Board as to the desirability of the Board making a compulsory order for scavenging on the District Council respecting the townships of Cornforth, Sedgefield, Chilton, and Ferryhill, but the result of the enquiry has not transpired.*

The District Council have adopted Part III. of the Public Health Acts Amendment Act, which considerably increases its sanitary powers.

Sanitary Requirements.

1. The provision of suitable isolation hospital accommodation.
2. The more systematic enforcement of their powers by the District Council with regard to nuisances and insanitary property.

*The Local Government Board have since made an order compelling the District Council to undertake or contract for the scavenging and removal of house refuse in these townships.

SOUTH SHIELDS RURAL DISTRICT.

W. ARMSTRONG, L.R.C.P., Medical Officer of Health.

Area in Acres, 12,409. Estimated Population, 1896, 15,275.

Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
29·3	12·8	1·76	160
Phthisis death-rate, 0·98.		Respiratory diseases death-rate, 2·29.	

Of the above statistics the general death-rate is very satisfactory. Compared with 1895, there is a slight increase in both the infant mortality-rate and the zymotic death-rate.

Infectious Diseases.

The cases notified were 155, or one less than in the previous year, and the only disease at all prevalent was scarlet fever (107 cases, 7 deaths). Of the 13 cases of enteric fever, 9 were in the Boldon district, and the only death from the disease occurred in Boldon Colliery village. Four of the cases were at East Boldon, fairly close together, and may have been due to defective drainage, and steps are being taken to improve the ventilation of the drains. Measles of a mild type was epidemic in the district, causing 3 deaths, and there were also 5 deaths from whooping cough, and 15 from diarrhoea, four of the latter occurring in the workhouse. One case of small-pox occurred at Harton and was removed to the small-pox hospital of the South Shields Corporation.

General Sanitation.

The water supply to West Boldon was very unsatisfactory during the whole year, and for some weeks was turned off for 12 hours out of 24, the times

of supply being from 8 p.m. to 8 a.m. The water company have now placed a pumping station near the village, but the result is still not satisfactory. With regard to Boldon Colliery, the report states :—" Many " of the ashpits at Boldon Colliery are of the large, " open, old-fashioned type, and are, in my opinion, very " insanitary, and it is to be hoped that before long they " will be replaced by more modern ones." At West Boldon some improvements in the ashpits have been effected.

The attention of the medical officer of health was called at the beginning of the year to the polluted state of the river Don at Hylton Bridge. Nothing has yet been done, but it is stated that steps are being taken to prevent the pollution. A pure water supply is to be provided for a farm there, the present supply being very much polluted. The drainage of West Boldon has been improved by the trapping of surface gullies, and the erection of ventilating shafts. The report contains an account of a large number of sanitary improvements effected to individual properties, but at Lorne Terrace and The Barracks, East Boldon ; the Folly, West Boldon ; and D'Arcy Street, Harton, defects have not been remedied. A Local Government Board enquiry was held with regard to the proposed sewer for Cleadon, but the result was not known at the end of the year.

Considerable improvement is stated to have been effected at Boldon Colliery village, though there is " yet much room for improvement." Several of the streets are in a very bad condition, owing to want of

proper paving, though it is probable that this defect will shortly be remedied. Many of the ashpit-prives are also very insanitary, and should be replaced by more sanitary out-offices. A more systematic plan for the emptying of the conveniences "would greatly conduce to the general cleanliness of Boldon Colliery," and more attention to sweeping up after scavenging is much needed. The scavenging of West Boldon was unsatisfactory, and not regularly performed. The report calls attention to the fact that much of the sickness in the colliery districts is due to the overcrowding of the dwellings, the result, partly, of the want of house accommodation.

Sanitary Requirements.

1. A constant supply of water to West Boldon should be insisted on.
2. The abolition of the insanitary open ashpits at Boldon Colliery, and the making and paving of the remaining streets there.
3. Improvement in the arrangements for scavenging the Boldon district as suggested in the report.
4. Isolation hospital accommodation for the district.

STOCKTON RURAL DISTRICT.

W. BLANDFORD, L.R.C.P., Medical Officer of Health.

Area in Acres, 34,228.

Estimated Population, 1896, 13,200.

Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
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26·9

12·5*

1·1

120

Phthisis death-rate, 0·75.

Respiratory diseases death-rate, 1·59.

*Excluding 3 deaths not belonging to the district and including 8 deaths belonging to the district, but occurring in public institutions outside it.

All the above mortality statistics are very satisfactory. Compared with the previous year there was a great reduction in the infant mortality rate, though in the Billingham township it continued very high.

Infectious Diseases.

There were 122 notified cases as compared with 219 in 1895, there being a large reduction in the number of cases of scarlet and enteric fever reported. The scarlet fever cases numbered 99 (4 deaths), and the disease was epidemic at Haverton Hill and Norton. The disease was principally spread by the non-recognition of the mild cases which were allowed to associate with other children. All the 14 cases of enteric fever were isolated, and there was nothing to show that the cases had a common origin. Whooping cough was prevalent during the year and caused 5 deaths. Twelve patients were removed to the Stockton Borough fever hospital, and the arrangement with that Borough respecting the isolation of patients from the rural district is stated to work very satisfactorily.

General Sanitation.

The water supply has been satisfactory and plentiful, and the supply to Thorpe has been improved by the sinking of a new well. Most of the inhabitants of Billingham village now use the water company's supply. Improvement in the ventilation of some of the sewers has been made at Norton and Eaglescliffe, and all the sewers have been regularly flushed. The outlet of the sewer at Wolviston was foul during the summer,

and is "liable to periodically become a nuisance." The scavenging which is undertaken by contractors has been satisfactorily done, and to the regular and frequent performance of this work is attributed the good health of the district. Almost all the cowsheds have been constructed to meet the requirements of the bye-laws, and a great improvement has been effected by the enforcement of the bye-laws.

Sanitary Requirements.

None referred to, but if possible the recurrence of the nuisance from the outfall sewer at Wolviston should be obviated.

SUNDERLAND RURAL DISTRICT.

ROBERT STOBO, M.B., Medical Officer of Health.

Area in Acres, 7,404. Estimated Population, 1896, 19,137.

Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
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37·6

18·4

3·3

193

Phthisis death-rate, 1·3.

Respiratory diseases death-rate, 3·5.

The birth-rate and general death-rate are both much lower, as is also in a slight degree the zymotic-rate. The infant mortality-rate is, however, higher; in fact, with one exception, the highest in any year since 1882. Dr. Stobo thinks that the inexperience of mothers and improper feeding may have something to do with this high infant mortality.

Dr. Stobo was not appointed medical officer of health till August.

Infectious Diseases.

The notifications numbered 169, or only one half of the number notified in the previous year.

There were only 56 cases of scarlet fever, but 5 deaths resulted, and the case mortality was therefore high. The majority of the cases occurred at Ryhope and Ford. Dr. Stobo points out how wrong is the fatalism of many parents who think that their children are bound to have such diseases as scarlet fever and measles, and that the sooner they take them and get them over the better, for it is proved that the older a child is when he is attacked by these diseases, the less danger there is of a fatal result. Enteric fever was again somewhat prevalent, more especially at Ryhope, 78 cases being notified in the district. At Ryhope the disease may have been in part caused by percolation from an old sewer which passed under the houses in several streets where it was prevalent, but another insanitary condition is the pollution of the ground and subsoil round about dwellings. A number of cases of enteric fever occurred in Ford Terrace, Hylton, and probably resulted from the insanitary condition of the out-offices. These are about to be replaced by ashclosets. The report recommends that air-tight pails containing a strong disinfectant should be supplied by the District Council for the reception of the dejecta of all typhoid patients, so as to avoid the infection of the ashpits. There were 26 deaths from measles, 23 of which occurred in the Bishopwearmouth South township; 12 deaths from whooping cough and 13 from diarrhœa. 17 cases were removed to isolation hospitals, all those from the rural district going to the Sunderland Borough hospital. The district is still without any isolation accommodation of its own.

General Sanitation.

The greater part of the district is well supplied with water, but the village of Tunstall is still supplied from a well, which, it is stated, has been cemented round to prevent foreign matters from entering it. A part of the township of Ford is supplied by surface water, which, however, under ordinary circumstances, does not appear liable to pollution. A safer supply from the public water company is however recommended. The dairies and cowsheds have been kept under strict supervision.

The system adopted by the District Council of cleansing the ashpits weekly has worked very well, and Dr. Stobo thinks that it has had much to do with the reduction of the mortality from enteric fever and diarrhœa. A number of the ashpits at Ryhope have been cemented out, and are in a much better condition, and in the Ford township a great improvement has been effected by the substitution of ashclosets for many of the insanitary middens, and the report urges that this work should be continued. Much of the property at Castletown is in an unsatisfactory condition, but as the place has recently been purchased by a coal company it is expected that the property will be improved. Notices have been served for that purpose. Some of the private streets at Grangetown are in a very bad condition, and a great improvement would be effected by the making of the streets. The pollution of the Don by the sewage of Usworth and Washington still continues, and the District Council are urging the

Chester-le-Street District Council to carry out the required sewage disposal scheme. The building by-laws are being revised by the clerk and sanitary officers, and the work will shortly be completed.

Sanitary Requirements.

1. Proper isolation hospital accommodation for the district.
2. The recommendation as to the supplying of covered pails containing disinfectants for the reception of the dejecta of typhoid patients should be adopted.
3. A better water supply for those parts of the Ford township at present depending on a surface water supply.
4. The making and paving of the streets at Ryhope and Grangetown.
5. The work of replacing the insanitary middens by the small ashclosets should be continued.

WEARDALE RURAL DISTRICT

(Derwent Division).

C. J. CONNOR, M.B., Medical Officer of Health.

Area in Acres, 13,144. Estimated Population, 1896, 523.

Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
22·9	7·6	Nil.	Nil.

The above statistics are very satisfactory even for this purely rural district. There were no deaths from either phthisis or acute lung diseases.

Infectious Diseases.

The Infectious diseases (Notification) Act was adopted during the year, but no cases were notified, and there were no deaths of a zymotic nature.

General Sanitation.

The water supply to Edmondbyers has been extended, and an additional standpipe erected. The water supply to Tounfield was examined owing to a complaint as to its quality, but it was found satisfactory. Some improvement in the pipes and tank has since been effected. The district has been periodically inspected, and some nuisances arising from accumulations of manure have been dealt with. New building bye-laws came into force in the district during the year. The schools are reported to be in a good sanitary condition, and the dairies and slaughter-houses to have been kept clean.

Sanitary Requirements.

None specially mentioned.

WEARDALE RURAL DISTRICT.

(Stanhope Division).

T. LIVINGSTONE, M.D., Medical Officer of Health.

Area in Acres, 24,527. Estimated Population, 1896, 2,657.

Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
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22·9

14·6

0·37

65

Phthisis death-rate, 1·1.	Respiratory diseases death-rate, 1·8.
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There is a considerable decrease in the birth-rate, although the estimated population is lower than that of 1895. The general death-rate is slightly higher than that of the previous year. The mortality statistics are generally very satisfactory.

Infectious Diseases.

The Notification Act came into force in the district about the middle of the year. The only death

of a zymotic nature was one of membranous croup at the Batts, Frosterley. Measles was very prevalent during the first two months of the year, but there were no fatal cases. The district is still without accommodation for its infectious sick.

General Sanitation.

All the villages in the district are stated to be well supplied with water, though during the very dry weather there was a scarcity at Hill End and Bridge End. At the former place the supply has been improved, and surface pollution during heavy rainfalls prevented. The water supply has been extended to a block of houses at Frosterley, and to 22 houses at Rookhope. A number of nuisances arising from accumulations of refuse, leaking privies, &c., have been dealt with, and at Hill End handbills were distributed with good effect owing to the careless throwing about of household refuse. New house drains have been laid down for 8 houses at Crawleyside, and 7 houses at the Batts, Frosterley.

The sanitary arrangements of the schools in the district are stated to be fairly good, and improvements in the North Schools, Frosterley, have been made. All the schools have a water supply.

The pond or dam at Dam Hill is stated to be a nuisance, and should be filled up. The low lying ground at the Batts was flooded during the heavy rains, and rendered the houses very damp. In the school yard of the same village (Frosterley ?) a surface drain is stated to be very much needed. A number of new

privies have been built in different parts of the district and others have been improved.

Sanitary Requirements.

1. The provision of isolation hospital accommodation.
2. The proper disposal of the sewage of the district.
3. New building and sanitary bye-laws.

WEARDALE RURAL DISTRICT.

(St. John's Division).

JOHN EASTON, L.R.C.P., Medical Officer of Health.

Areas in Acres, 36,096. Estimated Population, 1896, 3,400.

Birth-rate.	Death-rate.	Zymotic death-rate.	Infant mortality-rate.
22'0	20'2	1'17	133

Phthisis death-rate, 3'2. Respiratory diseases death-rate, 3'2.

The birth-rate is very low, but the death-rate is higher than in any year since 1890. The death-rate from phthisis was also excessive, and there were also 3 deaths from tubercular disease of other organs. Dr. Easton points out that this high mortality from tuberculosis has been attributed to the occupation of many of the inhabitants as lead miners, to the close inter-marriage of the families in the district, and to climatic conditions, and he says :—" These three (causes) "combined greatly intensify a predisposition to the "disease, and it is possible are finding expression in "the high death-rate from phthisis and other lung "troubles." Another possible cause of tuberculosis mentioned in the report is the consumption of milk from tuberculous cows.

Infectious Diseases.

The Notification Act was adopted in June, but no case was notified up to the end of the year. Early in the year five cases of enteric fever occurred near Westgate, but none of them ended fatally. The cause of the disease could not be discovered. Measles was epidemic in the early part of the year, and all the zymotic deaths (4) resulted from this disease. Owing to its prevalence the schools at Lanehead, Wearhead, St. John's Chapel, and Westgate were closed for some weeks. The importance of providing isolation hospital [accommodation is urged in the report.

General Sanitation.

The various villages in the district have been systematically inspected by the medical officer of health and inspector. The water supply to most of the villages is good, but at Ireshopeburn and Windy-side it needs improving. The sewers are mostly stone drains, and are not satisfactory. A proper sewerage scheme for Westgate has been drawn up by the surveyor, and is before the District Council. Nine new privies have been erected in different parts of the district, four of them being for houses which were previously without such accommodation. Other improvements include spouting at Westgate and drainage for two houses at Kitty Crag.

The nuisances dealt with had mostly to do with accumulations of house refuse and manure. The slaughter-houses are generally clean, but the dairies and cowsheds might be greatly improved by through

ventilation. The report points out that during the winter the cows are housed in byres which are badly ventilated, and have little light, conditions favourable for the development and spread of tubercular disease among the animals, which through the milk may be transmitted to the human subject.

Sanitary Requirements.

The following are mentioned :—

1. An isolation hospital, with suitable ambulance and disinfecting apparatus.
2. Refuse depôts for the different villages.
3. Sanitary pipe drainage for the villages.

The provision of better light and ventilation for the cowbyres is also very necessary.

WEARDALE RURAL DISTRICT.

(Wolsingham Division).

T. V. DEVEY, L.R.C.P., Medical Officer of Health.

Area in Acres, 24,036. Estimated Population, 1896, 3,405.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

30·2 17·6 2·06 135

Phthisis death-rate, 1·1. Respiratory diseases death-rate, 1·7.

The general and zymotic-death-rate, though somewhat lower than in 1895, are above the average, and not altogether satisfactory.

Infectious Diseases.

The Infectious Diseases Notification Act came into force at the end of July, and between that time and the end of the year six cases were notified. Diphtheria was the most fatal disease, causing 4 deaths, and the medical officer of health is of opinion that the outbreak resulted from the importation of a case into

the district. The cause of the 2 cases of enteric fever notified could not be discovered. An outbreak of measles, which was entirely confined to the infants' department of the National schools, possibly resulted from the disturbance of dust during the reboarding of the floors. Two deaths resulted. Houses where infectious disease occurred were disinfected; also the Wesleyan schools.

General Sanitation.

At Wolsingham 17 additional houses have been supplied with pure water. The sewers are stated to be in good order, and a number of improvements in house drainage have been effected. Referring to the disposal of the sewage, Dr. Devey says:—"I have frequently inspected the sewerage field, and think there has not been as much care used during last year in the distribution of the sewage as should be given to it." In the report a list of improvements to houses, &c., is given. A number of notices were served for the abatement of nuisances arising from the accumulation of house refuse and manure, and 4 houses in Meeting House Lane were closed as unfit for habitation. Many of the cowsheds are stated to be in need of white-washing, but the slaughter-houses are reported to have been kept clean.

Sanitary Requirements.

1. More careful attention to the disposal of the sewage of Wolsingham.
2. All dairies and cowsheds should be registered and periodically white-washed and cleansed.
3. Isolation hospital accommodation.

PORT SANITARY DISTRICTS.

HARTLEPOOL PORT.

S. BIGGART, M.D., Medical Officer of Health.

Disease on Shipboard.—During the past year 54 vessels were inspected by the medical officer of health, or 7 less than in the previous year. 33 of these vessels had sickness on board.

Hospital.—37 cases of infectious disease were received into the port sanitary hospital, but only 3 of these were from ships (2 of typhoid and one of malarial fever). Two cases of small-pox were removed to the hospital from West Hartlepool, but there was no case in the port itself, though a seaman who landed from a vessel in the port developed the disease on reaching Shields, and as soon as this was known the vessel was thoroughly fumigated and other necessary precautions taken. The hospital is stated to be in a thoroughly efficient condition.

Port Traffic.—The arrivals included 1,065 transmigrants, 621 immigrants, 397 alien sailors (most of them being crews for new foreign ships), and 299 British subjects. The above were all seen by the inspector on arrival or before landing.

Vessels Inspected.—The number of vessels visited by the port inspector was 1,255, and he also made 419 re-visits. There were 125 notices served for sanitary defects, and all were complied with except

where the vessel had to leave the port, and in such cases the inspector of the port of destination was notified, if possible, to see that the work was carried out. The spaces and cabins of 97 passenger steamers were cleansed and disinfected. The water supply of all vessels is stated to have been carefully attended to.

RIVER TYNE PORT.

W. EDMUND HARKER, M.D., B.S., Medical Officer of Health.

Disease on Shipboard.—The following were the cases reported :—Small-pox and suspected small-pox, 16 on voyage and 6 on or after arrival in the Tyne ; diarrhœal affections, 89 during voyage and 3 on or after arrival ; scarlet fever, 6 on or after arrival ; diphtheria, 1 on arrival ; enteric fever, 6 on voyage and 10 on or after arrival ; measles, 1 on arrival ; malarial fever, 11 on voyage and 4 on or after arrival ; dysentery, 3 on voyage and 1 on arrival ; yellow fever, 22 on voyage ; influenza, 19 on arrival. 27 patients were admitted to the Port Sanitary Hospital, and 1 case of small-pox and 1 of enteric fever terminated fatally.

Vessels from Infected or Suspected Ports.—503 vessels arrived in the Tyne directly or indirectly from ports infected or suspected of infection, and 162 vessels coming directly or indirectly from infected ports were boarded by the officers of the Port. The medical officer of health visited 40 vessels, of which 33 had reported or suspected sickness on board.

No cholera infected vessel arrived in the Tyne during the year. All infected vessels and articles were thoroughly disinfected.

Emigrants.—The emigrant vessels have been supervised as in previous years, and have all been visited by the inspector. The number of emigrants passing through the port was 233, or 43 less than in 1895.

General Sanitary Work.—The number of visits paid to vessels was 12,348, and 75 visits were also paid to water boats. Of the vessels inspected, 761 were in a dirty condition, and in 193 cases there were structural defects. The usual notices for the removal of defects and abatement of nuisances were served.

Water Supply.—There are 29 water boats, and these, on examination, were found to be in good condition. In 40 cases the drinking water of ships arriving from ports infected or suspected to be infected by cholera was changed and the water tanks purified.

Food Supply.—The food on one vessel was found to be bad, and was destroyed. The number of special cargoes inspected, consisting mostly of food stuffs, was 1,243.

Cattle Ships.—16 of these arrived in the port in a filthy state, and were cleansed under the supervision of the inspector.

Overcrowding.—Only two cases were observed, and these were abated after notice.

Floating Hospital.—The accommodation for the nurses has been improved by the addition of a sitting-room. During the Congress of the Sanitary Institute in Newcastle, the hospital was visited by a large number of members and delegates, who expressed their satisfaction at the equipment of the Tyne Port.

ADDENDUM.

STOCKTON.

THOMAS HORNE, M.D., Medical Officer of Health.

Area in Acres, 2,848.

Estimated Population, 1896, 55,000.

Birth-rate.

Death-rate.

Zymotic death-rate.

Infant Mortality-rate.

30·18

15·8

2·6

166

Phthisis death-rate, 1·8.

Respiratory diseases death-rate, 2·6.

The above mortality statistics compare very favourably with those of the previous year, the decrease in the general, zymotic, and infant mortality-rates being very marked, and largely the result of the diminished mortality from diarrhœa.

Infectious Diseases.

There was a very marked decrease in the prevalence of the notifiable diseases, only 455 cases being reported as compared with 969 cases in 1895, as a result of the diminished prevalence of both scarlet and enteric fevers. Scarlet fever was again the most prevalent disease, though there were 327 fewer cases and 22 less deaths than in the previous year. It was most prevalent during the first six months, only 60 cases being reported during the latter half of the year.

The enteric fever cases numbered 90 (10 deaths) as compared with 187 cases (21 deaths) in 1895. The disease was at no time epidemic in the town, the largest number of cases reported in any week being 6. The 90 cases had relation to 82 houses, and the probable causes of the cases are very fully discussed in the report. As is often the case in this county, the

incidence of the disease was greatest on the males (58 cases), and more than half the cases (49) were between 15 and 40 years of age.

There was absolutely no evidence of the disease having been caused or spread by the agency of either water or milk, but many of the cases are attributed to defects of drainage or to effluvia from drains, and to insanitary conditions connected with the privy-middens or the means of cleansing them. At least 10 of the cases of enteric fever were the result of the infection having been communicated from person to person. With regard to the connection between the middens and enteric fever, Dr. Horne says:—"I cannot too strongly emphasize my belief that a more strenuous effort to lessen the capacity, to increase the ease of cleansing, and to ensure more frequent removal of the contents, of existing and future privy receptacles would, through the economy of a lessened incidence of enteric fever alone, more than compensate the community for any outlay incurred, for I am convinced the existing conditions not only ensure continued endemicity of the disease, but make epidemicity in the future a practical certainty, whenever the conditions favouring such epidemicity shall occur."

28 of the 35 deaths from diarrhœa occurred between July and October, and 26 of the deaths were among children under 1 year of age. Dr. Horne points out that the great decline in the mortality from diarrhœa as compared with 1895 was largely the result

of climatic and telluric conditions which were unfavourable to the development of the organism which is the cause of the disease. Measles was fatally epidemic from June to September inclusive, and caused 50 deaths—a larger number than in any of the previous ten years. In 1895 there was not a single death from this disease.

The number of patients removed from the borough to the isolation hospital was 150. The question of providing isolation for small-pox cases was considered during the year, but still remains in abeyance. The recommendations of the medical officer of health as to the effectual disinfection of clothing, bedding, &c., were also considered, but so far nothing has been done regarding them.

General Sanitation.

Distinct improvement in the means of excrement disposal has been effected during the year, and 371 privies have been much improved in one way or another, and in 38 instances water-closets have been substituted for privies. The report points out the great danger to health of many of the existing midden-privies owing to their large size, and the nuisances that inevitably occur during the process of emptying and cleansing them.

In April last the Sanitary Committee resolved :
 “ That in the opinion of this committee the water
 “ carriage system of sewerage is desirable, and that
 “ the Urban District Council be recommended to
 “ adopt such system wherever practicable.” The
 further consideration of the matter has, however, been

adjourned till the surveyor has completed his survey of the town. Several of the town sewers have been relaid, diverted or improved, but the means of ventilation and of flushing of the sewers still appear to be unsatisfactory.

More attention is now given to the laying of house drains, but many of the house drains in the town are stated to be very faulty.

The water supply has been good, and will be still further improved when the filtering works are completed. 25 houses were supplied with a good supply, and three wells, the water of which was unwholesome, were closed, and the town's water supply substituted.

Two of the slaughter-houses in the town have been much improved, but the others remain in much the same condition as they were a year ago. Six registered common lodging-houses were closed during the year as unfit for habitation. A portion of another was also closed, but as it has since been rebuilt and made sanitary the closing order was revoked. Legal proceedings were successfully instituted with regard to one case of unsound food, and 2 cases of adulteration.

A representation was made to the Town Council under Part I. of the Housing of the Working Classes Act, 1890, respecting "an obstructive building" in Black Bull Yard, but up to the end of the year the Council had not decided whether they would proceed under the Act.

Regulations under the Dairies, Cowsheds, and Milkshops Order of 1895 have been approved by the Local Government Board, and are now in force in the town; and bye-laws on the subject of new streets and buildings have been drafted, and are now before the Local Government Board for final approval. The Town Council have included erysipelas among the diseases to be notified, but have not yet adopted the Infectious Diseases Prevention Act, 1890, and the importance of adopting this Act is again urged in the report.

Sanitary Requirements.

1. The adoption of the Infectious Diseases Prevention Act, 1890.

2. The provision of means of isolation for cases of small-pox.

3. The disinfection by steam of all infected articles of clothing, bedding, &c.

4. The substitution of water-closets for the midden-privy and pan systems of excrement disposal is very desirable, and till this is accomplished the more frequent removal of the contents of the middens is most necessary.

5. The remedying of the defects of house drainage, and also better ventilation and flushing of the sewers.

TABLE A.

TABLE GIVING POPULATION, BIRTH-RATE, DEATH-RATE, &C., WITHIN THE URBAN DISTRICTS OF THE
ADMINISTRATIVE COUNTY OF DURHAM.

URBAN DISTRICTS.	Medical Officer of Health.	Area.	Population 1896 (Estimated)	Births.	Deaths.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1000 Births.	Phthisis Death-rate.	Lung Diseases Death- rate.	Notifica- tion Act in operation?	Number of cases Notified	Hospital accommo- dation?	Number of cases removed to Hospital.	Percentage of Notified Cases removed to Hospital.	REMARKS.
BOROUGHES.																	
Darlington ...	J. Lawrence, M.D. ...	3945	41000	1147	594	28'0	14'4	1'66	133	1'2	1'8	Yes.	347	Yes.	192	55'3	
Durham ...	A. M. Vann, M.R.C.S. ...	880	15000	428	307	28'5	20'7*	1'6	170	1'4	5'8	Yes.	64	Yes.	12	18'7	* Excluding 43 deaths not belonging to the district.
Hartlepool ...	J. Rawlings, M.R.C.S. ...	552	24500	778	416*	31'8	16'9*	2'4	131	1'6	2'5	Yes.	66	Yes.	4	6'06	* Including 31 deaths occurring outside the district but belonging thereto, but excluding 15 deaths in district not belonging thereto.
Jarrow ...	J. M. Nicoll, M.B. ...	728	37000	1058	643*	28'3	17'3*	3'18	179	1'2	2'9	Yes.	337	Yes.	104	30'8	* Including 31 deaths in Harton Workhouse, and County Asylum belonging district, but excluding 4 deaths in district not belonging thereto.
Stockton ...	Thomas Horne, M.D. ...	3344	55000	1660	872*	30'1	15'8*	2'6	166	1'8	2'6	Yes.	455	Yes.	150	32'7	* Excluding 15 deaths not belonging to district, but including 10 deaths occurring outside district belonging thereto.
West Hartlepool ...	S. Gourley, M.D. ...	2454	51920	1688	755*	32'3	14'5*	1'5	126	1'2	2'8	Yes.	304	Yes.	27	8'8	* Including 65 deaths belonging to the district, but occurring outside, and excluding 6 deaths in district not belonging thereto.
URBAN DISTRICTS.																	
Barnard Castle ...	A. H. Sevier, M.D. ...	533	4341	116	71*	26'7	16'3*	0'69	94	2'07	2'53	Yes.	21	Yes.	...	...	* Including 3 deaths occurring outside the district, and excluding 8 deaths in district not belonging thereto.
Benfieldside ...	George Renton, M.D. ...	1525	7000	222	135	31'1	18'9	1'6	180	0'7	2'2	Yes.	40	Yes.	3	7'5	
Bishop Auckland ...	T. A. McCullagh, M.R.C.S. ...	692	12197	379	235	31'0	17'1*	1'2	148	1'0	3'0	No.	...	Yes.	...	...	* Excluding 26 deaths not belonging to the district.
Blaydon ...	Philip Brown, M.D. ...	9349	17500	604	238	34'5	13'5	2'5	137	0'51	2'74	Yes.	397	Yes.	31	7'8	
Brandon & Byshottles	H. Smith, M.D. ...	6683	15812	527	249	33'3	16'1*	2'0	193	0'50	4'8	Yes.	142	Yes.	30	21'1	* Including 7 deaths occurring outside the district.
Consett ...	George Renton, M.D. ...	993	8860	287	173*	32'3	19'5*	1'9	184	1'69	5'3	Yes.	63	Yes.	...	...	* Including 16 deaths occurring outside the district.
Felling ...	Thomas M. Clayton, M.B. ...	2684	20000	778	373*	38'9	18'6*	2'2	141	1'9	3'7	Yes.	180	No.	...	...	* Including 7 deaths occurring outside the district.
Hebburn ...	George N. Wilson, M.B. ...	1180	19278	678	281*	35'1	14'6*	1'9	123	1'63	2'59	Yes.	100	Yes.	17	17	* Including 10 deaths occurring outside the district.
Hetton-le-Hole ...	J. Adamson, M.D. ...	1618	14250	583	259	38'8	18'1	5'7	175	0'77	1'8	Yes.	74	Yes.	2	2'7	
Houghton-le-Spring ...	D. S. Park, F.R.C.S. ...	1551	6720	304	136	45'2	20'1	2'8	118	1'3	2'3	Yes.	68	No.	...	...
Leadgate ...	George Renton, M.D. ...	1838	4660	169	100*	36'2	21'4*	2'5	213	1'7	5'1	Yes.	25	Yes.	10	40	* Including 2 deaths occurring outside the district.
Ryton ...	Philip Brown, M.D. ...	5150	6450	238	101	36'9	15'6	2'0	147	1'1	3'2	Yes.	105	No.	...	...
Seaham Harbour ...	L. Gerald Dillon, M.D. ...	1089	9830	428	215*	43'5	21'8*	1'4	212	2'1	4'6	Yes.	114	Yes.	...	...	* Including 8 deaths occurring outside the district.
Shildon & East Thicky	S. Fielden, M.D. ...	1066	10082	326	160*	32'3	15'8*	1'88	132	0'4	2'6	Yes.	105	No.	...	...	* Including 3 deaths occurring outside the district.
Southwick ...	James Stobo, L.R.C.P. ...	845	11550	447	222*	38'7	19'2*	2'42	192	2'0	3'1	Yes. Since 1st Sep., 1896.	18	Yes.	10	55'5	* Excluding 1 death not belonging district, but including 3 deaths occurring outside the district belonging thereto.
Spennymoor ...	Robert S. Anderson, M.D. ...	3385	17856	620	337*	34'7	18'8*	2'7	190	0'95	4'36		205	No.	...	...	* Including 3 deaths occurring outside the district.
Stanhope ...	John Gray, M.B. ...	211	1935	52	22*	26'8	11'3*	1'0	57	1'5	1'5	No.	...	No.	...	...	* Excluding 2 deaths not belonging district.
Stanley ...	T. Benson, L.R.C.P. ...	2006	11000	417	213	37'9	19'3	4'3	187	1'3	2'1	Yes.	163	Yes.	2	1'2	
Tanfield ...	T. Benson, L.R.C.P. ...	4650	7300	257	103	35'2	14'1	0'95	136	0'68	2'2	Yes.	65	Yes.	...	...
Tow Law ...	James Wild, L.R.C.P. ...	470	4554	150	80	32'9	17'5	1'53	180	1'1	4'61	Yes.	27	No.	...	...
Whickham ...	A. W. Attwater, L.R.C.P. ...	5961	9870	390	182	39'5	18'0*	1'82	195	1'3	2'0	Yes.	47	No.	...	...	* Excluding 3 deaths not belonging district.
Willington ...	R. E. Brown, L.R.C.P. ...	3795	8120	314	158	38'6	19'4	2'8	146	0'7	3'0	Yes.	133	No.	...	...

TABLE A 1.

ADMINISTRATIVE COUNTY OF DURHAM.

DEATHS AT CERTAIN AGES AND FROM CERTAIN SPECIFIED CAUSES.

URBAN DISTRICTS.	DEATHS AT SUBJOINED AGES.							DEATHS FROM SUBJOINED CAUSES.																			
	At all Ages.	Under 1 Year.	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	Small-pox.	Scarlet Fever.	Diphtheria.	Membranous Croup.	Fevers.						Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea and Dysentery.	Rheumatic Fever.	Phthisis.	Bronchitis, Pneumonia, and Pleurisy.	Heart Disease.	Injuries.	All other Diseases.
Darlington	594	153	93	25	40	175	108	...	15	2	3	...	6	...	...	...	...	3	19	16	7	3	50	76	59	15	320
Durham	307	74	40	16	18	76	83	...	2	3	...	...	1	...	...	1	...	1	13	4	1	3	18	80	25	10	145
Hartlepool	416	103	82	27	21	115	68	...	...	3	1	...	6	...	...	1	...	1	38	5	6	3	41	62	23	12	214
Jarrow... ..	643	190	149	35	35	163	71	...	6	7	1	...	13	...	...	...	...	...	47	27	18	..	46	109	35	22	312
Stockton	872	274	172	36	41	223	126	...	9	12	1	...	10	...	...	3	...	2	50	28	35	3	99	144	59	19	398
West Hartlepool	753	215	127	47	47	203	114	...	16	2	2	...	5	...	...	2	...	2	28	11	22	...	73	153	50	22	365
Barnard Castle	71	11	2	2	4	28	24	...	...	...	...	...	...	...	...	...	...	...	1	...	2	1	9	11	5	2	40
Benfieldside	135	40	19	6	5	26	39	...	...	2	...	...	3	...	...	1	...	1	...	5	2	...	5	16	19	3	78
Bishop Auckland	235	61	25	6	11	67	65	...	1	...	...	...	4	...	...	1	...	...	6	2	2	...	17	44	18	4	136
Blaydon	238	83	34	14	16	50	41	...	2	1	...	...	11	...	...	...	...	...	1	5	24	1	9	48	18	7	111
Brandon & Byshottles	249	102	45	14	9	51	28	...	4	2	5	...	4	...	...	...	...	...	9	8	...	2	8	76	16	...	115
Consett	173	53	29	11	10	47	23	...	...	2	1	...	1	...	...	2	...	1	7	4	2	...	15	47	15	6	70
Felling	373	110	70	23	19	92	59	...	3	1	6	...	2	1	...	3	...	1	19	2	9	5	36	73	33	8	171
Hebburn	281	84	42	25	22	87	21	...	2	1	...	...	2	...	...	1	...	1	17	2	13	1	32	50	30	20	109
Hetton-le-Hole	259	97	66	8	8	54	26	...	...	...	2	...	3	...	...	2	...	1	26	21	30	...	11	26	16	5	116
Houghton-le-Spring	136	37	24	6	8	27	34	...	...	...	...	...	5	...	...	...	...	...	10	4	...	1	9	16	16	7	68
Leadgate	100	36	17	6	6	20	15	...	...	...	...	...	1	...	...	1	...	...	9	...	2	...	7	23	8	1	48
Ryton	101	35	9	2	12	22	21	...	...	3	...	...	2	...	...	...	...	...	...	2	6	...	7	21	6	1	53
Seaham Harbour	215	91	26	10	14	47	27	...	2	...	...	...	5	...	...	...	...	...	4	...	3	...	21	46	15	1	118
Sildon & East Thickley	160	44	37	1	8	48	22	...	2	1	...	...	3	...	...	1	...	2	3	5	5	...	4	26	12	2	94
Southwick	222	86	40	12	13	47	24	...	2	...	...	...	1	...	...	...	...	1	9	9	7	...	24	36	6	5	122
Spennymoor	337	118	57	14	20	82	46	...	...	...	1	...	3	...	...	2	...	...	24	2	19	2	17	78	20	12	157
Stanhope	22	3	1	...	2	9	7	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	3	3	4	2	8
Stanley	213	78	42	15	12	44	22	...	12	3	6	...	3	...	...	1	...	...	18	6	...	1	14	23	15	3	108
Tanfield	103	35	18	4	5	25	16	...	1	...	...	...	...	...	...	...	...	...	2	...	4	2	5	16	8	3	62
Tow Law	80	27	5	6	5	16	21	...	...	1	...	...	...	...	...	1	...	...	2	2	...	2	5	21	4	2	38
Whickham	182	76	21	8	7	36	34	...	...	...	...	...	1	...	...	...	...	...	9	7	1	1	13	20	20	6	104
Willington	158	46	19	13	15	41	24	...	8	...	1	...	4	...	...	...	...	...	7	...	3	...	6	25	9	24	71
TOTAL	7628	2362	1311	392	433	1921	1209	...	89	46	30	...	100	1	...	23	...	17	379	177	223	31	604	1369	564	224	3751

TABLE B.

TABLE GIVING POPULATION, BIRTH-RATE, DEATH-RATE, &c., WITHIN THE RURAL DISTRICTS OF THE
ADMINISTRATIVE COUNTY OF DURHAM.

RURAL DISTRICTS.	Medical Officer of Health.	Area.	Population 1896 (Estimated)	Births.	Deaths.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1000 Births.	Phthisis Death-rate.	Lung Diseases Death- rate.	Notifica- tion Act in operation?	Number of cases Notified	Hospital accommo- dation?	Number of cases removed to Hospital.	Percentage of Notified Cases removed to Hospital.	REMARKS.
Auckland, Division I.	T. A. McCullagh, M.R.C.S.	18005	28210	769	403	27·2	14·8	2·48	185	0·9	1·9	Yes.	333	No.	...	...
Do. Division II.	G. W. Ellis, L.R.C.P.	43393	36750	1207	539	32·8	14·9*	1·8	149	0·7	2·3	Yes.	242	No.	...	...	* Including 9 deaths occurring outside the district.
Barnard Castle (Barnard Castle Div.)	A. H. Sevier, M.B.	13636	1004	23	9	22·9	8·9	Nil.	43	Nil.	Nil.	Yes.	9	No.	...	...
Barnard Castle (Middleton Division)	J. Atkinson, L.R.C.P.	40897	3804	108	54	28·3	14·1	0·52	148	0·79	3·1	Yes.	2		...	...
Barnard Castle (Staindrop Division)	James Beattie, L.R.C.P.	25494	6350	188	100	29·6	15·7	2·5	223	0·4	2·3	Yes.	14		...	...
Chester-le-Street	J. Taylor, M.D., D.P.H.	34869	56699	2157	1083*	38·1	19·1*	3·72	182	1·07	2·91	Yes.	849	Yes.	121	14·2	* Including 5 deaths occurring outside the district.
Darlington	C. M. Hardy, M.B.	42034	9367	225	117	24·0	12·4	1·17	133	0·4	1·9	Yes.	104	Yes.†	11	10·5	
Durham, E. Division	W. A. Hepburn, M.D.	15324	15681	601	320	38·2	21·0*	3·2	199	1·1	4·0	Yes.	107	Yes.	6	5·6	* Excluding 4 deaths not belonging district and including 14 deaths occurring outside, but belonging thereto.
Do. W. Division	E. Jepson, M.D.	15730	11460	381	210	33·2	18·7	3·1	162	1·04	3·83	Yes.	81	Yes.	5	6·1	
Easington	J. Arthur, L.R.C.P., D.P.H.	36942	42563	1642	795	38·5	18·6	2·6	174	1·76	2·27	Yes.	466	Yes.	8	1·7	
Hartlepool	S. Gourley, M.D.	18368	2500	77	26*	30·8	10·4*	0·4	90	0·4	2·0	Yes.	3	Yes.†	...	...	* Excluding 95 deaths occurring in the district, but not belonging thereto.
Houghton, N. Division	D. S. Park, F.R.C.S.	8399	14140	539	261	38·1	18·6*	3·1	171	1·2	3·04	Yes.	189	Yes.	2	1·05	* Including 3 deaths occurring outside the district.
Do. S. Division	J. R. Sutherland, L.R.C.P.	4791	5100	181	80	35·5	16·0	1·9	154	0·78	3·1	Yes.	30	Yes.	1	3·3	
Lanchester (Lanchester Division)	J. Wilson, M.D.	29956	16419	633	337*	38·5	20·5*	2·49	165	1·09	4·81	Yes.	178	Yes.	20	11·2	* Including 4 deaths occurring outside the district, and also 37 deaths in Workhouse not belonging to district.
Lanchester (Medomsley Division)	W. T. Bolton, L.R.C.P.	21213	7774	249	147*	32·0	18·9*	3·2	108	1·2	2·0	Yes.	148	Yes.	1	0·6	* Including 6 deaths occurring outside the district.
‡Lanchester (Stanley Division)	T. Benson, L.R.C.P.	3096	9000	356	172	39·5	19·1	2·88	143	1·55	2·44	Yes.	48	Yes.	...	...
Sedgefield	G. R. Sheraton, L.R.C.P.	43025	18432	740	495	40·0	18·7*	2·2	168	1·0	2·8	Yes.	225	No.	...	...	* Excluding 150 deaths in County Asylum.
South Shields	W. Armstrong, L.R.C.P.	12409	15275	448	196*	29·3	12·8*	1·76	160	0·98	2·29	Yes.	155	Yes.†	4	2·4	* Excluding 164 deaths in Harton Workhouse, &c.
Stoekton	J. W. Blandford, L.R.C.P.	34228	13200	356	165*	26·9	12·5*	1·1	120	0·75	1·59	Yes.	122	Yes.†	12	9·8	* Excluding 3 deaths not belonging district and including 8 deaths occurring outside, but belonging thereto.
Sunderland	Robert Stobo, M.B.	7404	19137	720	353*	37·6	18·4*	3·3	193	1·3	3·5	Yes.	169	Yes.†	17	10·05	* Excluding 7 deaths not belonging the district, but including 1 death outside, and belonging thereto.
Weardale (Derwent Division)	C. J. Connon, M.B.	13144	523	12	4	22·9	7·6	Nil.	Nil.	Nil.	Nil.	Yes.*	...	No.	...	...	* Since July, 1896.
Weardale (Stanhope Division)	T. Livingstone, M.D.	24527	2657	61	39	22·9	14·6	0·37	65	1·1	1·8	Yes.*	2	No.	...	...	* Do.
Weardale (St. John's Division)	John Easton, L.R.C.P.	36096	3400	75	69	22·0	20·2	1·17	133	3·2	3·2	Yes.*	...	No.	...	...	* Do.
Weardale (Wolsingham Div.)	T. V. Devey, L.R.C.P.	24036	3405	103	64	30·2	17·6	2·06	135	1·1	1·7	Yes.*	6	No.	...	...	* Do.

† In these districts arrangements have been made by which fever patients may be removed to the hospital in the adjoining urban district.

‡ This district became part of the Annfield Plain urban district in October.

TABLE B I.

ADMINISTRATIVE COUNTY OF DURHAM.

DEATHS AT CERTAIN AGES AND FROM CERTAIN SPECIFIED CAUSES.

RURAL DISTRICTS.	DEATHS AT SUBJOINED AGES.							DEATHS FROM SUBJOINED CAUSES.																			
	At all Ages.	Under Year.	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	Small-pox.	Scarlet Fever.	Diphtheria.	Membranous Croup.	Fevers.						Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea and Dysentery.	Rheumatic Fever.	Phthisis.	Bronchitis, Pneumonia, and Pleurisy.	Heart Disease.	Injuries.	All other Diseases.
Auckland, Division I.	403	143	66	16	29	97	52	...	3	1	...	...	12	...	...	1	...	1	28	7	21	1	27	55	26	11	209
Do. Division II.	539	181	83	28	31	115	101	...	6	1	2	...	4	...	...	1	...	...	16	32	6	...	27	85	24	21	314
Barnard Castle (Barnard Castle Div.)	9	1	...	1	...	1	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9
Barnard Castle (Middleton Division)	54	16	3	...	7	15	13	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	3	12	4	...	33
Barnard Castle Staindrop (Division)	100	42	14	3	5	17	19	...	...	1	...	...	3	...	...	...	...	...	5	7	1	...	3	15	9	...	56
Chester-le-Street	1083	395	223	63	55	214	133	...	28	2	7	...	14	...	...	3	...	2	94	5	25	6	61	165	55	33	583
Darlington	117	30	9	11	3	27	37	...	2	...	1	...	3	...	...	...	...	...	1	4	...	...	4	18	12	9	63
Durham, E. Division	320	120	69	16	17	59	39	...	6	...	1	...	2	...	...	2	...	...	24	16	2	3	18	64	17	10	155
Do. W. Division	210	62	51	12	8	48	29	...	1	1	...	...	...	...	...	...	...	...	22	10	2	1	11	43	10	10	99
Easington	795	287	159	35	32	172	110	...	7	1	7	...	8	2	...	2	...	4	42	17	27	2	75	97	35	22	447
Hartlepool	26	7	3	...	...	7	9	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	5	1	2	16
Houghton, N. Division	261	92	68	11	11	41	38	...	4	3	5	...	10	...	...	...	...	1	12	6	5	...	18	43	9	7	138
Do. S. Division	80	28	15	4	4	11	18	...	...	...	...	...	1	...	...	...	...	...	5	4	...	1	4	16	4	2	43
Lanchester (Lanchester Division)	337	105	56	19	23	54	80	...	8	1	5	...	4	...	...	...	...	1	8	6	9	3	18	79	14	...	181
Lanchester (Medomsley Division)	147	27	29	5	12	40	34	...	4	...	1	...	4	...	...	1	...	...	12	...	4	2	10	16	15	4	74
*Lanchester (Stanley Division)	172	51	46	14	3	36	22	...	1	2	...	...	...	...	...	1	...	...	16	4	3	...	14	22	15	...	94
Sedgefield	495	125	60	8	26	195	81	...	...	...	4	...	7	1	...	1	...	1	17	7	7	...	55	76	41	10	268
South Shields	196	72	31	9	13	44	27	1	5	1	...	...	1	...	...	...	...	...	3	5	11	1	15	35	11	9	98
Stockton	165	43	20	8	9	53	32	...	4	1	1	...	1	...	...	1	...	...	...	5	3	...	10	21	11	9	98
Sunderland	353	139	57	11	17	83	46	...	5	...	...	...	8	...	...	1	...	1	26	12	13	1	25	66	28	9	158
Weardale (Derwent Division)	4	...	...	1	...	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	3
Weardale (Stanhope Division)	39	4	4	2	4	11	14	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	3	5	12	3	15
Weardale (St. John's Division)	69	10	6	5	5	23	20	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...	11	11	4	1	38
Weardale (Wolsingham Div.)	64	14	6	6	4	17	17	...	...	4	1	...	...	...	...	...	...	...	2	...	...	...	4	6	2	3	42
TOTAL	6038	1994	1078	288	318	1382	978	1	84	19	37	...	82	3	...	14	...	11	337	147	141	21	417	955	360	175	3234

* This district became part of the Annfield Plain urban district in October.

TABLE C.

Tabulated Statement of the chief Vital Statistics of the Administrative County of Durham for the year 1896, compiled from the monthly returns supplied to the County Medical Officer by the Registrars.

1896.

	Population (Estimated 1896).	Births.	Deaths.	Zymotic Deaths.	Per 1,000 Population.				Deaths under 1 year per 1,000 Births	Percentage of Uncertified Deaths to Total Deaths
					Birth-rate.	Death-rate.	Zymotic Death-rate.	Phthisis Death-rate.		
Boroughs ..	221990	6751	3619	500	30.4	16.3	2.25	1.22	2.90	1.3
Urban Districts ..	220057	8253	4060	509	37.5	18.4	2.31	1.23	3.31	5.7
Rural Districts ..	333564	12183	5927	878	36.5	17.7	2.63	1.04	2.94	4.2
Administrative County	775611	27187	13606	1887	35.0	17.5	2.43	1.15	3.04	3.9
England and Wales...	30717355	917201	527929	66936	29.7	17.1	2.18	..	..	2.2

The death-rate for the county during 1895 was slightly higher than that for England and Wales, but all the chief mortality statistics are much more favourable than those of the previous year, and are considerably below the county average. As in previous years, the statistics for the boroughs are more favourable than those of the other urban districts, or of the rural districts in the county.

TABLE D.

INSPECTORS' REPORTS—URBAN.

URBAN DISTRICTS.		DWELLING-HOUSES AND SCHOOLS.										HOUSE DRAINAGE.										Water Supply	Pigsties	Animals Improperly Kept	Offensive Trades	Smoke Nuisances	Other Nuisances	TOTALS	Seizures of Unwholesome Food	Convictions for Exposing or Selling Unwholesome Food	Samples of Food and Drugs taken for Analysis	Samples of Food and Drugs found Adulterated.	Samples of Water taken for Analysis	Samples of Water condemned as unfit for use	Lots of Infected Bedding Stowed or Destroyed.	Houses Disinfected after Infectious Disease	Schools Disinfected after Infectious Disease	Prosecutions for Exposure of Infected Persons or Things	Convictions for Exposure of Infected Persons or Things.
		Foul Conditions	Structural Defects	Over-crowding	Unfit for Habitation	Lodging-houses	Dairies and Milk-shops	Cowsheds	Bakehouses	Slaughter-houses	Asiatic and Privies	Deposits of Refuse and Manure	Water Closets	Defective Yard Paving	Defective Traps	No Disconnection from Sewers	Other Faults																						
DARLINGTON—	Population, 41,000	2	18	...	...	...	...	...	...	216	5	32	70	58	4	95	...	6	...	...	...	...	5	509	68 lbs. meat 2½ cwt. fruit	...	23	3	1	...	158	135	...	...	...	
Nuisance Inspector—	Thomas A. Atkinson	2	21	...	6	2	...	...	...	183	1	13	187	123	3	3	...	...	4	...	...	...	...	549		...	...	...	...	...	...	...	...	...	...	...
Nuisances abated after Notice	...	4	31	...	6	2	...	...	...	365	4	45	223	169	7	98	...	6	4	...	...	...	...	970		...	...	...	...	...	...	...	...	...	...	...
DURHAM—	Population, 15,000	3	30	...	...	...	...	...	...	1	50	2	14	5	3	1	26	...	1	...	...	...	4	140	6	...	...	...	...	...	...	...	...	...	...	...
Nuisance Inspector—	James Coldwell	...	2	4	10	...	...	...	...	11	2	1	...	...	...	3	1	2	...	...	...	...	...	36		...	...	...	...	...	...	...	...	...	...	...	...
Nuisances abated after Notice	...	3	32	4	10	...	...	...	...	61	4	15	5	3	1	29	1	3	...	...	...	...	...	176		...	...	...	...	...	...	...	...	...	...	...	...
HARTLEPOOL—	Population, 24,500	7	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	121	6	...	38	1	...	...	28	26	...	...	...	
Nuisance Inspector—	J. Charlton	3	3	...	7	...	...	...	...	147	2	120	10	76	21	19	5	...	9	...	...	...	423	...		...	...	...	...	...	...	...	...	...	...	...
Nuisances abated after Notice	...	27	9	...	7	5	...	...	...	147	9	143	13	91	52	59	13	...	8	...	...	...	585	...		...	...	...	...	...	...	...	...	...	...	...
JARROW—	Population, 37,000	19	12	7	...	28	Visited Occasionally	...	...	32	76	5	7	48	4	...	159	13	21	5	...	3	157	596	3	3	33	1	...	...	...	...	...	...	...	...	...
Nuisance Inspector—	Edward Batey	...	...	...	...	...	Visited Occasionally	...	...	32	76	5	7	48	4	...	11	...	...	...	...	...	19	...		...	...	...	...	...	...	...	...	...	...	...	...
Nuisances abated after Notice	...	19	12	7	...	28	Visited Occasionally	...	...	32	76	5	7	48	4	...	159	13	21	5	...	3	157	596		...	...	...	...	...	...	...	...	...	...	...	...
STOCKTON—	Population, 54,530	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	112	1	59	2	3	3	...	305	...	3	3	...	
Nuisance Inspector—	Wm. C. Cowther	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...	...	...
Nuisances abated after Notice	...	140	727	31	18	...	...	...	...	2543	...	48	440	464	16	392	25	...	...	...	...	...	20	4864		...	...	...	...	...	...	...	...	...	...	...	...
WEST HARTLEPOOL—	Population, 51,920	205	53	35	40	9	...	4	7	...	47	3	59	36	87	4	32	13	3	14	...	6	116	773	30	...	51	7	14	11	2280	92	...	...	...	...
Nuisance Inspector—	Thomas Wheat	10	11	4	38	6	...	...	...	10	1	6	5	10	...	11	1	...	...	...	...	...	4	118		...	...	...	...	...	...	...	...	...	...	...	...
Nuisances abated after Notice	...	202	263	35	41	9	...	4	7	...	73	3	86	106	200	4	56	13	3	14	...	6	150	1275		
BARNARD CASTLE—	Population, 4,541	140	2	2	3	...	15	5	7	7	37	2	...	222	
Nuisance Inspector—	Joseph Wade	43	2	...	...	...	...	...	...	3	...	15	1	12	5	24	...	...	...	...	...	...	...	107		...	...	...	...	...	...	...	...	...	...	...	...
Nuisances abated after Notice	...	112	4	...	...	...	...	...	...	5	...	30	6	19	12	61	...	...	...	...	2	...	257	...		...	...	...	...	...	...	...	...	...	...	...	...
BENFIELD SIDE—	Population, 7,000	109	1	3	5	23	1	8	1845	...	212	2217	7	
Nuisance Inspector—	John Dixon	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...	...	...
Nuisances abated after Notice	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...	...	...
BISHOP AUCKLAND—	Population, 12,197	296	119	2	7	1	...	3	1	3	219	26	66	118	140	17	16	59	7	9	47	1156	
Nuisance Inspector—	R. Lindsay	3	45	2	7	1	...	...	...	43	3	16	31	35	...	3	9	...	...	...	...	9	208	...		...	...	...	...	...	...	...	...	...	...	...	...
Nuisances abated after Notice	...	295	98	2	7	1	...	3	1	3	180	26	62	96	114	17	14	59	7	9	...	...	44	1038		...	...	...	...	...	...	...	...	...	...	...	...
BLAYDON—	Population, 17,300	23	38	16	1	2	1	2	43	16	2	4	9	9	43	4	2	13	228	
Nuisance Inspector—	Robert Biggins	...	14	1	3	1	...	2	...	7	2	2	...	...	...	...	...	...	...	...	...	...	...	33		...	...	...	...	...	...	...	...	...	...	...	...
Nuisances abated after Notice	...	23	52	17	4	1	...	4	1	2	47	18	4	4	9	9	43	4	3	13	...	...	...	258		...	...	...	...	...	...	...	...	...	...	...	...
BRANDON AND BYSHOTTLES—	Population, 15,812	...	104	...	...	...	4	17	...	16	...	...	...	62	16	...	...	2	11	...	...	...	...	232	...	...	...	...	...	...	...	...	...	...	...	...	...
Nuisance Inspector—	Richard Gardner	...	104	...	...	...	4	17	...	16	...	...	...	62	16	...	...	2	11	...	...	...	...	232		...	...	...	...	...	...	...	...	...	...	...	...
Nuisances abated after Notice	...	...	104	...	...	...	4	17	...	16	...	...	...	62	16	...	...	2	11	...	...	...	...	232		...	...	...	...	...	...	...	...	...	...	...	...
CONSETT—																																							

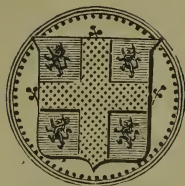
TABLE D1.

INSPECTORS' REPORTS—RURAL.

RURAL DISTRICTS.		DWELLING-HOUSES AND SCHOOLS.				Lodging-houses.	Dairies and Milk-shops.	Cowsheds.	Bakehouses.	Slaughter-houses.	Ashpits and Privies.	Deposits of Refuse and Manure.	Water Closets.	Defective Yard Fencing.	HOUSE DRAINAGE.				Water Supply.	Pigsties.	Animals Improperly kept.	Offensive Trades.	Smoke Nuisances.	Other Nuisances.	TOTALS.	Seizures of Unwholesome Food.	Convictions for Exposing or Selling Unwholesome Food.	Samples of Food and Drugs taken for Analysis.	Samples of Food and Drugs found Adulterated.	Samples of Water taken for Analysis.	Samples of Water condemned as unfit for use.	Lots of Infected Bedding Stoved or Destroyed.	Houses Disinfected after Infectious Disease.	Schools Disinfected after Infectious Disease.	Prosecutions for Exposure of Infected Persons or Things.	Convictions for Exposure of Infected Persons or Things.	
		Foul Conditions.	Structural Defects.	Over-crowding.	Unfit for Habitation.										Defective Traps.	No Disconnection from Sewers.	Other Faults.																				
AUCKLAND—	Population, 64,960	38	380	5	3	3	...	3	417	354	1	59	500	2	412	11	4	9	2201	}	5	4	3		
Nuisance Inspector—	Christopher Johnston	9	175	9	1	...	...	...	...	12	202	864	2	16	157	1	201	11	5	5	...	...	...	1660						
	Nuisances abated after Notice	6	54	9	...	...	...	...	...	12	94	861	2	11	56	...	110	1	5	2	...	...	...	1213					
BARNARD CASTLE—	Population, 11,158	...	2	1	4	1	24	...	10	2	44	}	18	5		
Nuisance Inspector—	Robert Graham	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	Nuisances abated after Notice	...	2	1	...	...	...	1	...	...	4	1	...	...	24	...	10	2	...	...	...	...	...	45	
*CHESTER-LE-STREET—	Population, 56,699	3	81	6	2	6	...	2	186	35	28	6	9	3	19	12	3	3	7	411	}	1	383	
Nuisance Inspectors—	Herbert Webb & Geo. Symon	...	2	1	...	...	...	...	...	...	19	4	5	...	1	...	...	262	1	...	...	...	3	298		
	Nuisances abated after Notice	3	27	2	1	...	...	6	...	2	176	30	22	4	8	3	11	7	3	3	...	...	5	313									
DARLINGTON—	Population, 9,367	...	14	1	2	...	1	32	2	...	1	11	3	14	10	2	3	96	}	3	1	14	14	
Nuisance Inspector—	Thomas R. Croad	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Nuisances abated after Notice	...	10	1	...	...	...	1	...	1	32	2	...	1	10	2	10	1	2	3	...	...	...	76							
DURHAM—	Population, 27,141	94	61	5	57	...	3	10	...	6	96	14	2	60	...	40	...	2	6	20	476	}	99	2	
Nuisance Inspector—	James Menzies	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	40
	Nuisances abated after Notice	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	347
EASINGTON—	Population, 42,563	30	100	130	}	4	1	2	14	
Nuisance Inspector—	George Phalp	...	...	...	32	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	33
	Nuisances abated after Notice	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	30	...	...	...	100	131
HARTLEPOOL—	Population, 2,500	22	2	6	5	6	...	4	5	3	6	1	2	...	13	75	}	2	2	
Nuisance Inspector—	R. Dunipace	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
	Nuisances abated after Notice	18	...	...	...	...	2	4	...	...	5	6	...	2	5	1	6	...	...	1	2	...	13	65					
HOUGHTON—	Population, 19,240	31	44	7	9	...	2	3	58	10	6	13	10	3	30	6	6	7	7	252	}	5	...	6	23	
Nuisance Inspector—	William Morley	16	19	1	2	...	...	...	...	...	36	2	...	3	...	...	11	3	...	3	...	...	4	100				
	Nuisances abated after Notice	37	53	7	9	...	2	3	...	...	80	10	6	14	9	3	36	6	6	9	...	...	11	301									
LANCHESTER—	Population, 33,193	...	2	1	...	6	...	3	127	7	11	22	...	6	...	1	6	1	...	2	...	195	}	1	1	2	6	3
Nuisance Inspector—	John E. Parker	1	49	1	1	...	...	...	...	...	34	3	1	21	...	27	...	1	...	1	...	...	11	151						
	Nuisances abated after Notice	6	61	1	4	6	...	3	...	...	207	10	12	31	...	270	...	12	8	1	...	2	13	647											
SEDGEFIELD—	Population, 18,432	...	450	50	...	130	...	150	1700	15	10	100	...	700	...	30	300	900	4535	}	2	2
Nuisance Inspector—	William Snowdon	...	46	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	20	...	...	...	25	91
	Nuisances abated after Notice	...	496	...	...	50	...	130	...	150	1700	15	10	100	...	700	...	30	320	...	...	...	925	4626								
SOUTH SHIELDS—	Population, 15,275	16	2	3	25	11	...	7	14	...	10	5	78	171	}	71	83
Nuisance Inspectors—	James Young & W. Welsh	...	40	...	...	...	...	11	...	...	16	4	...	...	3	...	23	1	...	2	...	...	...	100		
	Nuisances abated after Notice	16	42	...	...	...	...	14	...	...	35	15	...	6	17	...	29	...	...	7	...	...	78	259			
STOCKTON—	Population, 13,200	45	?	...	?	?	...	?	?	?	?	?	?	?	45	}	2
Nuisance Inspector—	John Elcoate	46	...	...	...	...	?	...	?	?	...	?	?	?	?	?	?	?	...	...	...	...	...	46				
	Nuisances abated after Notice	85	...	...	...	...	?	...	?	?	...	?	?	?	?	?	?	?	...	...	...	...	...	85				
SUNDERLAND—	Population, 19,137	1	140	10	1	...	24	24	...	10	150	6	...	85	65	...	10	3	30	15	1	575	}	1	1	8	Houses and bedding disinfected after every case of infectious disease.	
Nuisance Inspector—	G. H. Humble	1	79	5	1	...	10	10	...	...	80	6	...	32	...	...	...	3	5	...	...	...	...	232				
	Nuisances abated after Notice	1	140	10	1	...	24	24	...	10	150	6	...	85	65	...	10	3	30	15	1	...	...	575											
WEARDALE—	Population, 9,985	...	5	...	2	4	70	28	4	17	3	10	2	51	196	}	3	3	1
Nuisance Inspector—	W. Morley Egglestone	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	6
	Nuisances abated after Notice	...	3	...	5	...	...	...	...	3	66	28	3	...	...	...	15	3	10	1	...	...	45	182				

* The return supplied by Mr. Geo. Symon is only for the period since his appointment on the 18th September.

County Council of Durham.



REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

FOR THE

QUARTER ENDING MARCH 31st, 1896.

DURHAM :

CHARLES THWAITES, COUNTY PRINTER AND STATIONER, MARKET PLACE,

1896.

REPORT OF THE MEDICAL OFFICER OF HEALTH.

Infectious Diseases.

1. An outbreak of small-pox occurred in the borough of South Shields in February, and single cases were also reported from the South Shields rural district and from Hebburn. All the cases were at once isolated, and fortunately the disease, which appears to have been brought into the Tyne from abroad, was prevented from spreading.

2. Scarlet fever continued epidemic in several parts of the county during the quarter, more especially in the Stockton, Brandon, and Chester-le-Street districts, but generally its prevalence was not so marked as in the previous quarter, though the case mortality increased. Unfortunately the fear of scarlet fever among the working population of the county is so slight that often not the slightest precaution is taken to prevent a patient from infecting other members of his family or even his neighbours, and the difficulties in the way of stamping out the disease when once it has broken out in a populous village are consequently very great.

3. Cases of enteric fever were reported from nearly every district in the county during the quarter, but, except at Riseburn in the Auckland rural district and in the Blaydon district, its prevalence was not very serious, and was in marked contrast to the previous quarter, when it was epidemic in many parts of the county.

4. I have prepared a special report on the epidemic of enteric fever in the Consett urban district during 1895, and it will be laid before you. Copies of it have already been forwarded to the Consett District Council for their consideration.

5. Measles was fatally epidemic in several districts during the quarter, especially in Spennymoor and in the adjoining rural districts of Auckland and Durham. Owing to its prevalence it was found necessary to close the elementary schools at Witton Park in the Auckland rural district and Bewick Main in the Chester-le-Street rural district. The Washington elementary school was also closed on March 2nd for 14 days owing to the occurrence of diphtheria in the master's house.

Isolation Hospitals.

6. At the request of a joint committee representing the urban districts of Shildon and Willington and the rural district of Auckland which had been appointed for the purpose of considering the erection of isolation hospitals for these districts, an informal meeting took place at Bishop Auckland between that committee and the Isolation Hospital Sub-Committee appointed at your last meeting. I understand that the joint committee have since decided to erect two permanent hospitals for isolating cases of infectious disease from the districts they represent, and are now endeavouring to procure suitable sites.

7. Your sub-committee has not yet held a formal inquiry under the Isolation Hospitals Act res-

pecting any of the districts referred to in my last report.

Uncertified Deaths.

8. For some considerable time my attention has been called to the very large number of uncertified deaths in certain districts in the county, and I have ascertained that the non-certification of such deaths is the result of medical practice by unqualified persons. The districts in the county where this illegal practice is most prevalent are Spennymoor, Blaydon, and Hetton urban, and portions of the Chester-le-Street rural districts, and the effects of such practice, judging by the vital statistics, on the public health appears to be so prejudicial as to require your serious consideration. For instance, in Spennymoor during 1895 no less than 33 per cent. of the deaths in that town were uncertified as the result of unqualified medical practice, and in support of my contention that such practice has a serious effect on the public health, I have to point out that while the proportion of deaths under 1 year and under 5 years to total deaths, was, among those certified by registered medical practitioners only 34·4 and 49·1 per cent. respectively, the proportions among those deaths uncertified as a result of unqualified medical attendance were as high as 50·0 and 68·0 per cent. respectively. This excessive proportion of infant deaths in the practice of unqualified men is noticeable in all the districts where such practice prevails, as is shown in the subjoined table, and for each year for which I have statistics, so that it is certainly suggestive that many children

die whose lives might have been saved had they received skilled medical attention.

9. The following table shows the proportion of deaths under 1 and under 5 years to total deaths during 1895, as regards both certified deaths and deaths uncertified as a result of medical attendance by unqualified men, in the districts in which unqualified medical practice is most prevalent, viz., in Blaydon and Spennymoor urban and Chester-le-Street and Houghton (Southern Division, including Hetton urban district) rural districts :—

	At All Ages.	Under 1 year.	Percentage under 1 year to total deaths	Under 5 years.	Percentage under 5 years to total deaths	Percentage of deaths from zymotic diseases.
*Total deaths	2138	818	38·2	1149	53·7	13·3
*Deaths certified by legally qualified medical practitioners }	1790	624	34·8	898	50·1	12·7
Deaths uncertified as a result of unqualified medical practice .. }	348	194	55·7	251	72·1	16·0

* Including deaths uncertified as a result of no medical practitioner (either qualified or unqualified) having been in attendance.

10. Then again, in districts where the Infectious Diseases Notification Act is in force unqualified medical practice, when it exists to any extent, must largely nullify the benefits that usually result from the adoption of that act, for unqualified medical men are under no obligation to notify cases of infectious disease under the act, and should they do so they are not

entitled to any payment for the notifications ; consequently cases of infectious disease attended by these men are not reported to the Sanitary Authority, who are therefore unable to take the precautions which may be necessary in such cases to prevent the disease from spreading. I have no doubt that many persons call in these quacks under the impression that they are legally qualified medical practitioners, and this impression is strengthened by many of these unqualified practitioners giving bogus death certificates which are almost identical with the official form of death certificate, and are usually accepted by the registrar of deaths without comment. Under their regulations registrars are required to report to the coroner all deaths attended by suspicious circumstances, but in some districts very few of the deaths uncertified as a result of unqualified medical attendance are reported by the registrars to the coroner, who is therefore unable to take any action.

11. That there are difficulties in the way of preventing this illegal medical practice cannot be denied. Prosecutions of the offenders under the Medical Acts, which have been undertaken in this county have not been successful in putting a stop to their practice, and though the holding of an official enquiry by the coroner into every death uncertified as a result of unqualified medical attendance would probably be effectual, there are under existing circumstances great difficulties in the way of this being done. But the facts that the percentage of uncertified deaths in this county is twice as high as that for England and

Wales ; that such non-certification is very largely the result of medical practice by persons not legally qualified, and that such practice is prejudicial both to the public health and to the sanitary administration of the districts in which it prevails, call for action being taken without delay, and I would suggest that the attention of the Local Government Board and of the General Medical Council be called to them.

Auckland Rural District.

12. CLOSING ORDERS.—As a result of action taken by the County Council, closing orders have been obtained at the Auckland Police Court, after the cases had been several times adjourned, with regard to two houses at Witton Park ; but the Justices dismissed applications by the County Council for closing orders in respect to two other houses at Back John Street, Witton Park. These houses are still, in my opinion, quite unfit for habitation, and I would recommend that the Council should again exercise its powers under the Housing of the Working Classes Act with regard to them.

Para. 13,
June, 1895.

13. The following houses, which in my reports for the quarters ending June and September last were scheduled as unfit for habitation, have not been put into a sanitary condition, and I think further action should be taken by your committee respecting them :—

Para. 72,
June, 1895.
Para. 66,
Sept., 1895.

SITUATION.			TENANT.
Shop Hill, Coundon	...	...	Thos. Bruce (or Brewis).
Ship Houses, do.	...	...	Robt. Pattison (late Thos. Curry)
Do. do.	...	...	J. Lumley.
Railway Station, Hunwick...	...	...	John Moses.
Do. do.	...	...	Wm. Pearson (late Geo. Cooke)
Middle Row, Witton Park..	...	...	The 10 occupied houses.
Chapel Street, West Auckland	...	...	Taylor.
Do. do.	...	...	Garthwaite.
Batey's Yard, do.	...	...	Stobart (late Thompson).

Para. 9,
Sept., 1895.

The houses at Low Lands, Storey Lodge Pit, and Foundry Lane End, West Auckland, have been much improved, and are now fairly habitable, though some further improvements are still required to those at Low Lands, and a better water supply to these houses, and to those at Storey Lodge Pit is very much needed.

Para. 16,
Sept., 1895.

14. WEST AUCKLAND.—There are still a number of sanitary defects at this village, some of which were reported on by me many months ago. At Baty's Yard, not only are some of the houses still damp and insanitary, but the drainage and privy accommodation are defective. At the low end of the village, in Cruddas's Yard, there are a number of houses without any drainage, and with very insanitary outbuildings. In Chapel Street improvements are in progress to some

of the houses, though to others which are without either proper privy accommodation or drainage, nothing has yet been done. At Burrell's Yard there are a number of houses without proper drainage, while their water supply is obtained from a pump, the surroundings of which suggest that its water is polluted. One house in this yard is so damp as to be unfit for habitation (see schedule). At Foundry Yard some of the house drains are still untrapped, and a serious danger to health. I understand that notices have been served by the District Council on the owners of the above-mentioned properties to remedy most of the sanitary defects which exist, but there appears to be much delay in enforcing such notices when they are not obeyed. Since the scavenging of this village has been contracted for by the District Council, the cleansing of the ashpits and the removal of house refuse appears to have been satisfactorily performed.

15.—RISEBURN.—There is at present a serious outbreak of typhoid fever at this small village. The village consists of three rows of houses forming three sides of a square, which is completed by the small stream known as the Riseburn beck, which passes close to the village on the north side. The houses are of fair construction, and have through ventilation. Except to the West Row, where the drainage consists of a defective open channel, the drains to all the houses are properly trapped, but the whole of the sewage of the village discharges into the beck at different points. The ashpit-privies are not satisfactory, as they are

large and uncovered, and in some instances the privy roofs slope towards the ashpits. The water supply is that of the Weardale and Shildon Water Company, and is laid into every house, and I could obtain no evidence that the milk supply was in any way responsible for the outbreak, though the position and construction and general sanitary conditions of a byre in which a farmer who supplies most of the milk used in the village keeps his cows, were very unsatisfactory. The first case of typhoid fever occurred four or five months ago, the disease probably having been contracted outside the village, and the most likely explanation of its spread is that the excreta of this patient specifically infected an ashpit, which acted as a focus of infection for the rest of the village. The Riseburn beck is in a very foul and polluted state, and many of the inhabitants in whose houses cases of fever had occurred complained of the offensive smell that is said to be frequently given off from it. This stream receives the effluent of the Shildon sewage farm about a quarter of a mile above the village, but on each occasion I have examined the effluent it has been quite clear and free from smell, and the pollution without doubt occurs during the passage of the stream through the Shildon Urban District where it is covered over. It is possible that this fever may have been caused by the emanations from the stream and the gross pollution to which it is at present subject should no longer be permitted.

16.—SANITARY ACTS AND BYE-LAWS.—The District Council have recently decided to adopt those

sanitary provisions of the Public Health Amendment Act, 1890, and of the Infectious Diseases Prevention Act, 1890, which are applicable to rural districts, and the further powers conferred by these acts should, if enforced, greatly assist the District Council in improving the sanitary condition of their district.

17.—The building and sanitary bye-laws at present in force in this district are out of date, of too general a character, and do not give the District Council sufficient control over the sanitary arrangements and construction of new houses. It is very desirable that the District Council should either remodel their existing bye-laws or adopt others more in accordance with the requirements of modern sanitation.

Chester-le-Street Rural District.

18. CLOSING ORDERS.—An application by the County Council for a closing order under the Housing of the Working Classes Act, 1890, with respect to a house in North Bourns, Chester-le-Street, has been dismissed by the magistrates, who, prior to giving their decision, inspected the property. The decision appears to be a somewhat curious one, inasmuch as the Bench expressed an opinion that the house, which was about to be vacated, should not be allowed to be re-occupied until its sanitary condition had been improved. In my opinion the house was not in a habitable condition when the application was made for a closing order, and it appears to me very desirable that the plaintiff should have the same right of appeal to Quarter Sessions

Para. 27,
June, 1895.

against an adverse decision of the magistrates under the Housing of the Working Classes Act as is allowed to the defendant. The District Council have obtained closing orders from the magistrates with regard to two of the houses at Lumley scheduled in paragraph 48 of my September report, and the other insanitary houses mentioned in that report have either been made habitable or are being repaired. Several of the insanitary houses at Fatfield are also being repaired.

Para. 69,
Dec., 1895

19. **FATFIELD.**—In a letter dated March 14th last, the Clerk stated that the District Council had resolved “that a survey of Fatfield be taken, with a “view to having the village properly drained; also to “the bringing of the sinks within a reasonable distance “of each village.” During the past three months a considerable sanitary improvement has been effected in the village, many houses having been spouted and repaired. An analysis of the drinking water at present supplied to the village from three wells points to its being subject to surface pollution in each instance, and not a safe source of supply, and in the interests of the health of the inhabitants it is very necessary that a purer and better distributed supply should be obtained with as little delay as possible.

Para. 24,
Dec., 1895.

20. **LUMLEY.**—The sanitary condition of this village is gradually improving, and during the last four months a fair amount of work has been done in repairing and spouting houses and providing privy accommodation. The nuisance which existed at the west end of the village owing to sewage discharging into an

Para. 23,
Dec., 1895

open ditch has been removed, the sewage now being carried on to a field at some distance from any houses.

21. **LOW FLATTS.**—No sanitary improvement has yet been effected to the houses, though a few of them are at present unoccupied, but in a letter dated March 14th last the Clerk to the District Council states that “14 of the cottages are to be converted into 7, “flooring and ceiling to be raised, 1 is to be repaired, “and the 4 remaining are considered fairly good. “With respect to a water supply for this hamlet, Mr. “Tully, Lord Durham’s agent, has consented to allow “the Council to obtain a supply from Pelaw Grange “Farm (a few hundred yards distant), where the “tenants use the Newcastle and Gateshead Company’s “water. As soon as arrangements can be made the “required extension will be made and a supply given “to each house. The place is also to be drained.”

Para. 27
Dec., 1895.

Durham Rural District.

22. **LUDWORTH.**—The drainage of this village has been greatly improved by the laying down of proper ventilated pipe sewers, into which the channels of the Cross Rows discharge through trapped openings. The old ashpits in the front streets of the Cross Rows have also been removed, and the general condition of the village is much more satisfactory. There is however still no distribution of the water supply through the village, and all water used for domestic purposes has to be carried from the pit. The carrying of drinking water in open buckets for a considerable distance through the streets of a colliery village involves great

Para. 36,
June, 1895.

risk of its contamination by particles of dust and filth, and standpipes should be erected within easy distance of all houses in the village.

Easington Rural District.

23. CLOSING ORDERS.—As six months have now elapsed since I reported the following houses to be unfit for habitation, and as little or no improvement has been effected in their condition I recommend your Committee to take further action with regard to them.

SITUATION.	TENANT OR NUMBER.
Braddyll Street, South Hetton	Nos. 1, 2, 3, 4, 5, 7, 8, 22, 23, 24, 25.
Cook's Buildings, Trimdon Foundry	Wynn.
Middle Row, South Wingate	Wall.
Do., do.	Howarth.
Wingate Lane	Brittlebank.
Do.	Lawson.
Do.	Ryans.
Do.	Clark.
Do.	Samson.
Do.	Robt. Bell.
Do.	A. Atkinson.
Do.	James Forster.

24. EASINGTON VILLAGE.—More than a year ago I reported that the house drains of several houses situated on the opposite side of the road to the King's Head Inn were untrapped, and a serious danger to

health, and though in several subsequent reports I have alluded to this defect it has not been remedied. The ashpit-privies to several of the houses on this side of the road are very insanitary owing to their construction and proximity to the houses, and in some instances the only way of removing their contents is through the house passages. The common lodging-house is still without any ashpit accommodation.

25. SOUTH WINGATE.—Some slight improvements are being made to the insanitary houses in this village, but there are several houses in High Row without any privy accommodation. Two years have elapsed since I first reported on this deficiency.

Para. 37,
Sept., 1895.

26. THORNLEY COLLIERY.—A 12-inch sewer is now being laid along the low end of the Cross Rows to carry off the sewage from these rows. Several of the houses in these rows which were scheduled in my last report as being unfit for habitation owing to their excessive dampness are now much dryer and more sanitary. This improvement appears to have resulted from the tenants keeping fires burning in their bedrooms, and from the exceptional dryness of the winter, but I am afraid that in periods of wet weather the houses will again be very damp. No improvement has been effected to the houses at the lower end of Hartlepool Street. Some of them are in a dilapidated state, and with neither privy accommodation nor proper drainage (see schedule). The cleansing of the ashpits and the scavenging of the village appear to be much better performed than formerly.

Para. 39,
Dec., 1895.

Para. 34,
Dec. 1895

27. WINGATE LANE.—A sewer has been laid at the back of the houses, and several of them are now provided with drainage. A well has been sunk near the roadside, opposite to the houses, but it is very roughly constructed, and surface water and other impurities readily find access. The water had a dirty appearance and is of very doubtful purity. I have submitted a sample to the County Analyst, who reports that it “is unfit for drinking purposes,” and “appears to contain a very considerable proportion of foul surface water.” Some slight improvements have been effected to a few of the houses, but several are still in an insanitary condition.

Para. 35,
Dec., 1895.

28. STATION TOWN.—The sewage from this village still discharges into an open ditch by the side of the road leading to the colliery, where it stagnates, and during the coming summer it will undoubtedly be as great a nuisance as in previous years to those passing along the road.

29. SOUTH HETTON.—At the bottom of Front Street a small runner which passes underneath the roadway is grossly polluted by the sewage, much of which enters from a tank receiving the drainage of part of the village, and is very offensive. The tank is situated only a few yards from the highway, and must be a source of danger to health to the public at all times, and when it is cleaned out the filth is simply deposited beside it, and is most objectionable. The tank should certainly not be allowed to remain in its present position, and the pollution of the stream should

be prevented. The Eight Rows are still unspouted and nothing has yet been done to improve the drainage of the village, which in several streets consists of defective surface channels, and is very objectionable.

30. WHEATLEY HILL COLLIERY.—The condition of this village has been much improved during recent months by the provision of drainage and privy accommodation for all the houses, many of which have also been spouted and repaired. A better distribution of the water supply is still much needed, as at present there are only two stand pipes for supplying the whole village, and many of the inhabitants have to carry the water they use for domestic purposes 200 to 300 yards. Apart from the labour and loss of time incurred in carrying the water for so long a distance there must be considerable risk of its contamination by dust from ash-pits, &c., in its transit in open buckets through the streets. The nuisance caused by the ashpit refuse of the village being deposited near to houses in Plantation Street and Quarry Street, and which I reported on six months ago, still continues, and constitutes a very serious danger to the health of the people living in the vicinity of the tip, many of whom complain of the smell from it in their houses.

Para. 37,
Dec., 1895.

31. At High Wheatley Hill the houses are still without any drainage or water supply, and the cleansing of the ashpits is still very badly performed, although several months ago the District Council stated that a scheme to provide the houses with drainage and water supply had been before them and "is now being carried out."

Para. 29,
Dec., 1895.

32. DAVY LAMP.—With regard to the want of drainage to the houses, the Clerk to the District Council wrote in December last that “the work of draining this place is to be done by the Durham Rural District Council, and when done this Council will pay its proportion of the cost as previously arranged.” A copy of my last report containing the above statement was forwarded to the Durham Rural Council, and they have since forwarded a report to the County Council from their Surveyor, who says that the statement is not correct, and that “no arrangement was ever made or even mentioned that your Council were to carry out the work of draining the houses in the Easington district at that place. This is a matter entirely for the Easington Council to deal with.” The Easington District Council should therefore cause the houses at Davy Lamp, in their district, to be provided with proper drainage without any further delay.

Houghton Rural District.

Para. 42,
Sept., 1895.

33. COX GREEN.—The two houses on the bank side have now been very greatly improved and provided with the necessary out-door conveniences, and though the back walls are still somewhat damp, they are rapidly becoming dryer.

34. At Chapel Opening there is a house in a very damp condition and not fit for habitation, and other houses near it are in need of spouting and general repairs (see schedule).

35. WEST RAINTON.—Near this village there are four cottages, known as Knott’s Cottages, without any privy accommodation, while their water supply is

obtained from an open well which is sometimes flooded by a small stream which receives part of the sewage of West Rainton. The water from that well is undoubtedly not fit to be used for drinking purposes and a purer supply should be obtained.

36. MIDDLE RAINTON.—The sewage passes into an open ditch, at the low end of the village, which is in a very foul condition. A public footpath runs alongside the ditch for a considerable distance, and the smell from the stagnant sewage is very offensive to anyone passing along the path and must be dangerous to their health.

Lanchester Rural District.

37. CLOSING ORDERS.—The insanitary house at the Barracks, Dipton, has been closed, and notice under the Housing of the Working Classes Act has been served by the District Council on the owner of the insanitary house at Wilkinson's Buildings, Dipton. With the exception of one house, where some defects still exist, the property at Forster's Yard, Hill Top, has now been put into a habitable condition. In the Front Street, Hill Top, Dipton, there are two houses in a damp, defective condition and with very insanitary surroundings (see schedule).

Para. 42,
Dec., 1895

38. USHAW MOOR.—The houses in this village are generally in good condition, with through ventilation, proper spouting, and drainage, but the ashpit-privies to several of the rows are objectionable, being large, uncovered, and with the roofs of the privies sloping towards the ashpits. At the low end of the village there are 12 houses known as the Huts,

which are built of wood, and generally in a poor state of repair. They have no drainage, and at the time of my visit several of the ashpits were in a dilapidated condition. These huts are certainly not desirable dwelling-houses, and it is doubtful if they are fit for habitation. The sewage and surface water of the village nearly all pass into an objectionable cesspool under the road, the overflow from which finds its way into the Dearness stream.

39. ESH WINNING.—There are a number of back-to-back houses in this village, but the houses are all spouted, and provided with proper drainage and water supply, and as a result of action by the District Council a large number of the ashpits have been covered over. The yard paving of many of the houses is, however, defective, and the yards of several houses recently erected are unpaved. It is certainly desirable that the District Council should obtain powers to enable them to insist that the yards of all new houses should be either cemented or properly paved.

40. ESH HILL TOP.—A number of houses are in need of spouting and general repairs, and the privy and ashpit accommodation is in several instances defective, and some houses are without any ashpits. There is no system of drainage to the houses here, but the want of it does not appear to cause any serious nuisance, as the houses are not at all crowded together, and mostly have plenty of land for the disposal of the sewage. Many of the inhabitants depend on wells for their water supply, the water of which is

said to be satisfactory, though it is desirable that it should be periodically analysed. Many of the ashpits were in an overful condition.

41. ESH VILLAGE.—The houses are generally of fair construction and kept in good condition, though a number of them have no through ventilation. The village is properly sewered and the drains are all trapped, but there is no system of sewage disposal. The sewage discharges into a ditch, which passes for part of its course by the side of a footpath leading from Langley Park. The condition of this ditch is undoubtedly offensive, especially in hot weather, to people passing along this path, and the sewage should not be allowed to discharge into it. The scavenging of the village does not appear to be satisfactory, as many of the ashpits were overful.

42. QUEBEC.—The houses have all through ventilation and self-contained paved yards, but the paving of many of the yards is very defective, and many of the ashpit-privies are in need of repairs. A good deal of improvement has lately been effected to many of the houses as a result of the owners having been served with notices by the District Council. At present there is no paving in front of the majority of the houses, and they would be much improved and rendered more comfortable if small cement footpaths were laid down in the front streets. The drainage of the village consists of open channels which are very insanitary, but the District Council have decided to provide the village with a proper system of sewerage

and sewage disposal. The scavenging of the village is undertaken by the colliery and appears to be well performed.

43. CORNSAY COLLIERY.—The houses generally are of fair construction, have through ventilation, and with a few exceptions are properly spouted. The ground round many of the houses is paved, but in some streets there is no paving and the rain water sinks into the foundations, causing dampness. The drains in the village are mostly trapped with a form of dipstone trap which is not satisfactory. The sewerage of the Cross Rows is in some respects very unsatisfactory, as in each street the sewers empty into two cesspits near the houses from which the main sewer passes under some of the houses. The cesspits are said to smell very badly, and several of the houses under or near which the main sewer passes are infested with rats. The cesspits should be abolished and the course of the sewer so altered that it does not pass under any of the houses. In Commercial Street there is also a defective sewer which the District Council are dealing with. The whole of the sewage of the village discharges unpurified into the Priest Beck. One of the most objectionable features of the village is the enormous size of the ashpit-privies, and all the ashpits are uncovered. In Liddle Street and Chadwick Street the middens are especially insanitary, and throughout the village they are a standing danger to health. In some instances the ashpits are used also as a receptacle for the surface drainage of part of the village.

44. HAMSTEELS VILLAGE.—The houses have through ventilation, and are for the most part of fair construction, though many of them are in need of spouting and other slight repairs. The Hamsteel Huts, however, consisting of 16 houses, are in a very insanitary condition, and not fit for habitation, but though notices were served on the owners some months ago under the Housing of the Working Classes Act, nothing has yet been done to improve their condition. The other houses in the village have mostly self-contained paved yards and large covered ashpit-privies. The drainage of the village, except for one row, is by surface channels, which are not satisfactory, and in the West Row the channel empties into a catchpit placed in the yard of one of the houses, close to the back door—a most insanitary arrangement. The whole of the sewage of the village passes unpurified into the Priest Burn, and a proper system of sewerage and sewage disposal is much needed for the village.

45. CORNSAY VILLAGE.—This is a small isolated village with no system of drainage, and in some parts of it nuisances exist from sewage stagnating near dwellings. A good water supply has recently been laid on to the village, but up to the present most of the inhabitants obtain their drinking water from two springs. Except for the want of a system of drainage, the condition of the village is fairly satisfactory, a number of sanitary improvements to property having been carried out in recent years, as a result of action taken by the Sanitary Authority.

46. HEDLEY FELL.—The houses are of fair construction, and have through ventilation, but some of them are in need of spouting. The whole of the drainage of the village is by open channels, which are in many parts defective, and cannot be considered sanitary. The whole of the sewage of the houses passes into a cesspit, and then, without any purification, into the Priest Beck, which it grossly pollutes. The ashpits are covered over but they are very large and objectionable. At Cowsley Cottages, near Hedley Fell, the surface channel, which is the only means of drainage, is defective and the sewage discharges unpurified into the beck.

47. EAST HEDLEYHOPE.—This village consists of five rows of houses, some of which are lined with wood, and only one storey high. The houses have through ventilation and are fairly spouted. The ashpit-privies are placed between the rows, and are covered over, but they are of large size, and not of good construction. The scavenging of the ashpits appears to be well performed. The only drainage for the village is by open channels, which are made of brick and generally very defective. At the ends of the rows they empty into cesspits, from which the sewage passes without any purification into the river Dearness. The village is much in need of a proper system of sewerage and sewage disposal.

48. LANGLEY PARK.—The whole of the colliery houses are of fair construction and have through ventilation, but a number of the private

houses in Quebec Street and Durham Road are back-to-back, and in these streets many of the yards are unpaved or badly paved and in a bad state. The ashpits erected to the newer houses are all covered, though often of too large a capacity. In Quebec Street and Durham Road many of the middens are large, open, and insanitary, and with the exception of one row, the ashpits of the colliery houses are also uncovered. The scavenging of the colliery houses appears to be very well done, but in several instances the ashpits belonging to private property were over full. The village is provided with proper sewers which are ventilated, and most of the house drains are properly trapped, but in South Street the drains are not trapped, and in the two Cross Streets the drainage consists of open channels discharging at the end of the streets into untrapped catchpits, which are very objectionable. At present the whole of the sewage passes unpurified into the river Browney, but plans have been approved by the District Council for the proper disposal of the sewage on land on the other side of the river.

49. LANCHESTER VILLAGE.—The houses in this village are generally in a fair state of repair, though many of them are very old. Many of the surroundings of the houses are, however, very insanitary, owing to want of proper drainage, unpaved yards, and offensive middens of bad construction. At the Blue Bell Yard, and to a number of houses in the front street the above defects are especially noticeable

The greater part of the village is properly sewered, but a number of houses are not connected with the sewers and their sewage, as does that of the whole village, finds its way into the river Browney. A good water supply has recently been laid on to the village, but most of the inhabitants still obtain their water, the quality of which is said to be good, from springs. At Dorman's Buildings the houses are unspouted in front and the ashpits are uncovered and receive the drainage from the privy roofs. The scavenging of the village appears to be very badly performed, as many of the ashpits were, on my visit, in an overful and filthy condition. In many respects the sanitary state of the village requires early attention.

50. It is only fair to state that notices have been served and other action taken by the District Council to remedy many of the defects which I have noted as existing in the above-mentioned villages, and it is to be hoped that during the present year many of them will be removed.

51. During recent years a very great improvement in the condition of the Lanchester rural district has been effected as a result of the action of the Sanitary Authority in causing every populous portion of their district to be provided with a pure and plentiful water supply. Great improvements in the sewerage and sewage disposal of many of the villages have also been carried out, though a good deal of work still remains to be accomplished in this direction. In no portion of their district does the District Council

undertake or contract for the scavenging or cleansing of the ashpits, but in several villages where this duty falls upon the tenants nuisances are of frequent occurrence owing to the ashpits becoming overful. It is frequently impossible for the occupant of a dwelling-house in a populous district to arrange for the regular and proper removal of excreta and house refuse from his premises, and it is certainly desirable in such cases that the District Council should either undertake the work, or contract for its being properly done.

Sedgefield Rural District.

52. CLOSING ORDERS.—The three houses at Dyke Row and Hogg Street, referred to in my last report, have had considerable repairs made to them, but they are still damp, and not in my opinion fit for habitation. I am informed, however, that the houses have only been temporarily repaired, and that it is the intention of the owners to re-build them as soon as possible, and I would therefore suggest that another three months be allowed to elapse before closing orders are applied for. With two or three exceptions, the insanitary houses at West Row, Ferryhill, have now been closed. Extensive improvements have been made to the almshouses at Sedgefield, which were scheduled in my last report as being unfit for habitation, and they are now in a habitable condition.

Para. 49,
Dec., 1895.

Para. 50,
Dec., 1895.

Para. 69,
Dec., 1895.

53. MAINSFORTH ROWS.—The conveniences to these houses have been mostly repaired, and the work is still proceeding, but the result is not satisfactory, as the ashpits have not been covered in, and

Para. 51,
Dec., 1895.

the paving of the yards, which for the most part is very defective, has not been repaired.

Para. 53,
Dec., 1895

54. **SEDGEFIELD.**—Although considerable improvement has been effected to the yards, drainage, and conveniences of several houses in Church Row, some of the conditions existing are still very insanitary, and in a number of cases the midden contents have to be carried, during scavenging, through the dwelling rooms. Although, owing to there being no back road, the refuse must be removed through the houses, the present insanitary conditions might be reduced to a minimum by the substitution of pail closets for the insanitary middens that are connected with many of the dwellings. This the District Council should insist upon, and also arrange for the frequent and regular emptying of the pails, otherwise some of the houses should not be allowed to be occupied.

55. **FERRYHILL VILLAGE.**—The sewage from a large number of the houses discharges into an open ditch by the side of the main road, about 200 yards to the Durham side of the village, and runs by the roadside for a considerable distance, causing a great nuisance, which in summer time especially must be very offensive to persons passing along the road. The District Council should at once take steps to abate the nuisance by properly disposing of the sewage.

South Shields Rural District.

Para. 56, 57,
58,
Dec., 1895.

56. In a letter dated 28th February last the Clerk states that the house at Chick Lane, Whitburn, has now been closed; that the repairs to the houses

at Lawn Terrace, East Boldon, have been completed, and the only remaining question is that of privy accommodation, on which the Council are now in communication with the owner ; that at Armstrong's Buildings, West Boldon, the privy accommodation has now been provided and, practically speaking, the defects have all been remedied ; that at Nicholson's Buildings, West Boldon, certain repairs have been done but not sufficient, and proceedings are being taken for a closing order ; and that the necessary alterations at Post Office Buildings, Harton, are being dealt with. I have inspected those places, and find that some repairs have been made to the houses at Lawn Terrace, but the drain is still stopped up, causing a great nuisance, and no improvement has been effected in the privy accommodation. At Armstrong's Buildings the tenants now have the use of an additional privy. The back room of the house occupied by Tutberry, however, still continues damp, and the tenants complain that they are frequently without any water supply, owing to the tap ceasing to run. On the occasion of my last visit there was no water supply, nor had there been any for several hours. Some repairs have been effected to Nicholson's Buildings, and the drainage and conveniences are in a much more sanitary condition. No improvements have yet been made to the ashpit-privies at Post Office Buildings, which are very insanitary. Both at West Boldon and at Boldon Colliery the scavenging and removal of refuse, though contracted for by the District

Council, are not satisfactorily performed, for on the occasion of my last visit I noticed many receptacles in an overful and insanitary condition, notably at the Square and Harper's Buildings, West Boldon, and in several of the streets at the Colliery.

Benfieldside Urban District.

57. In a letter dated 1st April last, the Clerk states that the portion of my last report referring to this district is receiving the attention of the sanitary committee of the District Council.

Bishop Auckland Urban District.

58. A Local Government Board enquiry was held on March 13th, at Bishop Auckland by Mr. G. W. Willcocks, one of the Board's Inspectors, into an application by the District Council for a loan of £9275 for improving the present water supply to the town, which is obtained from the river Wear, at a point below the entrance of the sewage of several thousand persons. The application was opposed by the Clerk of the County Council, and I gave evidence as to the danger of using for drinking purposes, under any circumstances, water derived from such a polluted source as the river Wear. The decision of the Local Government Board in the matter has not yet been made known.

Consett Urban District.

59. Although action has been taken by the District Council with the object of remedying some of the insanitary conditions mentioned in my September quarterly report, I regret to say that many of them still

remain unabated. A house at 14, Pitt Street, which was unfit for habitation has been pulled down, and water-closets are being erected on the site for the tenants of some adjoining property. A privy which was against a dwelling-house in Rippon's Lane has also been replaced by a water-closet, but the houses in this street which six months ago I reported as unfit for habitation, are still occupied, though they have neither yards, drainage, nor conveniences. The grossly insanitary conditions in Pitt Street and John Street also still exist, and the same remark applies to similar conditions between Pitt Street and Trafalgar Street, though I understand these latter are about to be remedied. The houses in William Street are mostly provided with water-closets, but few if any of the closets have any water supply, and several of them are in a most disgraceful condition. During a recent inspection I found the ashpits in William Street and Pitt Street in a very filthy overful condition, and the scavenging had evidently been entirely neglected for many weeks. There could be no stronger evidence of the necessity of the District Council undertaking or contracting for the proper scavenging of the town than the disgusting state of the ashpits in these streets on my last visit. If such conditions are allowed to exist the town will probably experience another epidemic of typhoid fever at no distant period.

Felling Urban District.

60. With reference to my remarks on this district in my September report, the clerk, in a letter

dated 15th January last, stated that the sanitary committee had reported to the District Council that a drain was to be made at the back of the Waggonway Row, Wardley Colliery, to prevent the water sinking into the foundations of the houses ; that the houses at Prospect Terrace, Bill Quay, were not fit for habitation, but that as the owners had promised to make them habitable, the committee recommended that they be given an opportunity of carrying out the necessary alterations ; and that the well at White Mere Pool had been closed and a new supply obtained, as an analysis had showed that the water was unfit for use. The houses at Prospect Terrace are at present being repaired, but they are not yet habitable. The drain at the back of Waggonway Row, Wardley Colliery, has not yet been made, and the houses are still without proper through ventilation.

Hetton Urban District.

61. The whole of the colliery houses in the Brick Garth have now been provided with proper privy accommodation in the form of earth closets, and the general condition of these houses has been very greatly improved, and is now satisfactory. I am informed that notices have been served on the private owners of property at Brick Garth and Easington Lane to remedy existing sanitary defects, and a good deal of improvement is at present being effected. Except for some slight improvements to a few of the houses the Cross Rows, Hetton, remain in the same condition as when last reported on by me, many of them being with-

out privy accommodation and otherwise in a defective condition. The two houses numbered 32 and 33, Bogg Row, on the insanitary condition of which I have several times reported, are now closed.

Leadgate Urban District.

62. A letter, dated April 6th last, has been received from the Clerk to the District Council, and stating with reference to the recommendations in my special report of December last, that new building and sanitary bye-laws for the district are before the Local Government Board for confirmation; that new bye-laws for the regulation of dairies, cowsheds, and slaughter-houses have been approved by the Local Government Board, and will shortly come into force; that notices have been served for the removal of the old stone or rubble drains, and for the remedying of other defects of drainage; that disinfection of houses has for some time been done and will be continued; and that the other sanitary requirements detailed in my report are under consideration by the District Council.

Seaham Harbour Urban District.

63. A complaint has been made to me that after the ashpits are emptied the contents are sometimes allowed to remain in the back lanes for a considerable time during the day. I have enquired into the system of scavenging and am informed that the ashpits are emptied by the servants of the District Council and the contents are carted away partly by the farmers in the neighbourhood and partly by the carts

of the District Council. Although on the occasion of my visit to the town I saw no evidence of ashpit contents lying in the back streets, it is probable that the complaint was well founded, and it is desirable that arrangements should be made by which scavenging should be completed during the night time or early morning.

64. More than two years ago I reported that there were no proper building or sanitary bye-laws in force in the town, and I regret to say that the same remark is still applicable. Consequently the District Council have no control over the construction and sanitary circumstances of new houses, which are being constantly built in the town without plans having first been submitted to the District Council or its surveyor. More than a year ago the Local Government Board strongly advised the Local Authority to at once adopt building and sanitary bye-laws, and in the interests of the health of the town it is to be hoped that this advice will be followed without any further delay.

Schildon Urban District.

65. Satisfactory progress has been made in the work of removing most of the insanitary conditions referred to in my report for the quarter ending September last. At Back Cheapside the objectionable ashpit-privies have been removed and earth-closets are about to be erected, and necessary improvements of drainage, paving of the yards, and spouting carried out. At Cottage Square, two houses have been closed, and the condition of those still occupied has been much im-

proved. At Summerson's Buildings, York Square and Stable Yard very considerable improvements have been effected in the sanitary surroundings of the houses. Legal proceedings have been taken against the owners of the houses at Garbutt's Buildings, and the case was adjourned for three months. The drains have been trapped, but the insanitary ashpit-privies still exist.

66.—A stream which passes through Shildon and into which the effluent from the Shildon sewage farm discharges is in a very foul and offensive condition. This condition is not caused by the effluent, but apparently is the result of pollution entering the stream in its passage through Shildon where it is covered over. Probably some sewage gains access, and I am informed that the waste material from gas works is turned into the stream, but, whatever the cause may be, steps should be taken to prevent the continuance of the gross pollution which is at present occurring.

Whickham Urban District.

67. MARLEY HILL.—The sanitary condition of this colliery village is still very unsatisfactory. The houses are nearly all back-to-back, consisting of only one room downstairs and an attic above, into which much of the vitiated air from the living room passes. The ventilation of the houses is, from their construction, very insufficient, and many of them are so overcrowded as to seriously endanger not only the health but the morals of the occupants. In one of these houses there were 10 persons of both sexes living, none of them younger than 13 years of age; in another there

Para. 68,
Dec., 1895

were 8 persons, the youngest being a girl aged 13 ; while several others were tenanted by families of 5, 6, and 7 persons. Surface channels have recently been laid down for the drainage of part of Cinder Oven Row and Middle Row, but many of the drain openings in Post Office Row and Middle Row are untrapped, and a serious danger to health. The condition of the ashpits on the occasion of my last visit was disgraceful, as they were all full, and in several instances tons of refuse were lying around them. At Marley Hill High Rows, and at Byer Moor also, many of the ashpits were overful and insanitary, owing to the scavenging having been neglected. At The Hold the back rooms of the houses are still damp, owing to the back walls for two or three feet high being built against a bank of earth. The back walls are boarded on the inside, and the dampness is, therefore, to a great extent hidden, but the rooms are none the less damp and insanitary, and the District Council should insist that the soil be excavated from against the houses. Some of the drains to these houses have been properly trapped, but a few are still badly trapped.

68. BYER MOOR.—The drainage of the houses at this place consists of brick surface channels, which are defective and objectionable. At each of the Long Rows the sewage from these channels discharges into a large cesspool which is situated only a few yards away, and from which a brick sewer passes under the floors of some of the houses, and discharges

into a ditch emptying into a quarry about a hundred yards from the lower row. The condition of the quarry is very objectionable, and in hot weather must cause a great nuisance. The tenants of some of the houses under which the sewer passes complain that smells are often noticeable in their rooms, which they attribute partly to the sewer itself and partly to the proximity of the cesspools. The open channels and cesspools should be taken up and a covered system of drainage laid down in such a manner that none of the sewers should pass under the houses. A number of the houses at Byer Moor and at Marley Hill High Rows require to be spouted.

69. MIDDLE TOWN.—The houses are still without any proper spouting, the common backyard is very defective and requires to be paved, and the ashpit-privies are very large, uncovered, and insanitary.

70. FELL SIDE.—There are about a dozen houses here without any water supply except what is obtained from a spring several hundred yards away. A proper supply of drinking water is much needed for these houses.

Housing of the Working Classes Act.

71. Appended is a statement of houses which, in my opinion are, in their present condition, unfit for habitation :—

DISTRICT.	SITUATION.	TENANT.
Auckland Rural ...	Back John Street, Witton Park ...	Fitzsimmons.
Do. ...	Do. ...	Marshall.

DISTRICT.	SITUATION.	TENANT.
Auckland Rural ...	Burrell's Yard, West Auckland ...	Smith.
Easington Rural...	Hartlepool Street, Thornley ...	Bennett.
Do. ...	Do. ...	Cairns.
Do. ...	Do. ...	Strutt.
Houghton Rural...	Chapel Yard, Coxgreen	J. Thompson.
Lanchester Rural	Front Street, Hill Top, Dipton ...	Clark.
Do. ...	Do. ...	Shaw.

Vital Statistics.

72. Statement for the three months ending
31st December, 1895:—

	Total Number in Administrative County.	Annual Rates per 1,000 Population.		
		Administrative County.	The three County Boroughs.	England and Wales.
BIRTHS	6,552	33·9	31·6	28·3
DEATHS :—				
All causes	3,592	18·6	19·3	17·5
Principal Zymotic Diseases	530	2·74	2·85	2·35
Small-pox	Nil.	Nil.	Nil.	0·01
Scarlet Fever	59	0·30	0·15	0·21
Diphtheria & Memb. Croup	38	0·19	0·17	0·35
"Fever" (Typhoid, etc.)..	138	0·71	0·81	0·28
Measles	53	0·27	0·03	0·55
Whooping Cough.. ..	44	0·22	0·45	0·25
Diarrhœa	198	1·02	1·21	0·70
		Per 1,000 Births.		
Under 1 year of age ..	1,216	185	194	161

73. There was a marked decrease in both the general and zymotic death-rates of the administrative county as compared with the previous quarter, but they were again higher than the similar rates for England and Wales. The mortality in the county from scarlet fever, enteric fever, and diarrhoea was very high, but on the other hand, the death-rates from measles, whooping cough, and diphtheria were very much lower than those for England and Wales. The infant mortality-rate in the county was again much above the average.

Tabulated Statement of the chief Vital Statistics of the Administrative County
Durham for the year 1895, compiled from the monthly returns supplied to the County
Medical Officer by the Registrars.

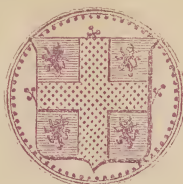
	Population (Estimated 1895.)	Births.	Deaths.	Zymotic Deaths.	Per 1,000 Population.				Deaths under 1 year per 1,000 Births.	Percentage of Uncertified Deaths to Total Deaths.
					Birth-rate.	Death-rate.	Zymotic Death-rate.	Phthisis Death-rate.	Bronchitis, Pneumonia & Pleurisy Death-rate.	
Boroughs ..	217680	6985	3886	667	32.08	17.8	3.06	1.46	3.02	1.6
Urban Districts ..	185444	7417	4066	607	39.9	21.9	3.27	1.31	4.06	5.8
Rural Districts ..	362396	13382	6778	786	36.9	18.7	2.16	1.08	3.12	5.3
Administrative County	764980	27784	14730	2060	36.3	19.2	2.69	1.25	3.32	4.5
England and Wales ..	30394078	921860	568758	64901	30.3	18.7	2.14	..	..	2.3

The death-rate for the county during 1895 was slightly higher than that for England and Wales, as were also the zymotic death-rate and the infant mortality-rate. It will be noticed that from whatever standpoint they are viewed, the mortality statistics of the urban districts are the most unfavourable, while those of the boroughs are the most satisfactory. The low death-rate in the boroughs as compared with the rest of county has also obtained in previous years and is probably to a considerable extent the result of their better sanitary condition.

T. EUSTACE HILL,
County Medical Officer.

April 14th, 1896.

COUNTY COUNCIL



OF DURHAM.

T. EUSTACE HILL, M.B., B.Sc.,
MEDICAL OFFICER OF HEALTH.

12, OLD ELVET,
DURHAM,

15th February, 1897.

Dear Sir,

Your circular letter duly received and in reply I have to say that I shall be glad to send you a copy of my annual report as soon as it is published. Your name was already down on the list to receive a copy, and I believe I wrote you some time ago saying that I would send you a copy annually.

Yours faithfully,

T. Eustace Hill

To

The Librarian,

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AND

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...

I, the undersigned, do hereby certify that the within and foregoing is a true and correct copy of the original as the same appears in the records of the County of ... and State of ...

...

Thomas H. ...

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